THE OIL WEEKLY

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The Oil Man's Calendar

AUG. 31 SEPT. 3	Twelfth Annual Field Conference and Joint Meeting, Kansas Geological Society and Rocky Mountain Association of Petroleum Geologists, Kit Carson Hotel, La Junta, Colorado.
SEPT. 14-16	National Petroleum Association, Hotel Traymore, Atlantic City.
27 OCT. 2	American Association of Petroleum Geologists, Mid-Year Meeting, El Paso, Texas.
OCT. 5-7	American Institute of Mining & Metallurgical Engineers, Fall Meeting, Petroleum Division, Plaza Hotel, San Antonio, Texas
10-13	North American Gas Tax Conference, Tulsa, Oklahoma.
10-14	American Gas Association, Atlantic City, New Jersey.
10-14	National Safety Congress, Petroleum Section, Stevens Hotel, Chicago, Illinois.
12-13	Indiana Independent Petroleum Association, Hotel Severin, Indianapolis, Indiana.
18	National Stripper Well Association and Oklahoma Stripper Well Association, Annual Meetings, Tulsa, Oklahoma.
19-21	Independent Petroleum Association of America, Tulsa, Oklahoma.
20-21	American Institute of Mining & Metallurgical Engineers, Petroleum Division and Industrial Minerals Division, Los Angeles, California.
27-29	Annual Convention, Texas Division, Mid-Continent Oil & Gas Assn., San Antonio, Texas.
NOV. 3-4	American Association of Petroleum Geologists, Pacific Section, Los Angeles, California.
14-18	American Petroleum Institute, (Annual), Stevens Hotel, Chicago
DEC.	Mid-Continent Oil & Gas Assn., Standing Tax Committees, Dallas, Texas.

Contents • August 22, 1938

Volume 90, Number 11

The Changing Panorama..... 13

Feature Section 15-34

Oil Industry Situation Good but Caution Needed..... 15
By L. J. LOGAN

Derrick Skidding Now Highly Skilled Art..... 18
By BRAD MILLS

Reclamation of Partially Depleted Pools in Southeast Kansas... 23
By C. C. CARLISLE

Use of Ferrous Phosphate in Applying Hard-Metal Coating.... 32
By MICHAEL J. LEAHY

News Section and Index..... 43

Men in the Industry's News..... 41

Foreign Developments 37

Squeaks from the Bull Wheel..... 85

New Products for the Field..... 81

Manufacturers News 83

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This Week's Panorama

ALTHOUGH recent weeks have brought some reaction from the high spirits of June and July, sentiment in the business world continues hopeful, and optimists are finding further indications of a definite upturn this fall.

Recent advances of industrial production have been contra-seasonal, it is asserted; construction activity is good; freight traffic has expanded; and retail sales of merchandise have been relatively large.

Meanwhile, special emphasis is laid on the expected stimulation of business by the authorized government spending and lending.

World Outlook Moderately Promising

Nevertheless, only cautious optimism regarding the world business outlook is justified so far, in the opinion expressed by the London Economist at the beginning of August. This is a difficult season for making economic forecasts, it is stated, but if there has been a real upturn, autumn should show appreciable recovery. However, much can happen before October, the review declares.

The better outlook in the United States is attributed mainly to the stock market rise, and there is much room for improvement, it is noted.

The recession has made appreciable headway in the Low Countries, and in most of the British countries and Latin America business continues to hobble along, according to the survey, while the Scandinavian countries have been about the only ones to maintain high levels of business, although even there some signs of recession have been gathering.

Oil Industry's Prospects Good

For the oil industry itself, the outlook is similar to that of business in general: moderately promising but still sufficiently uncertain to call for further strict control of crude production and refinery runs.

It is widely expected that autumn will bring a definite revival of business, and such a recovery undoubtedly would materially stimulate petroleum demand and tend to strengthen the oil markets.

But the oil industry cannot afford to take those anticipated developments for granted; to become over-enthusiastic in producing crude and turning out refined products.

The sound course is to stick to facts and existing circumstances, and not to be influenced too much by promising possibilities, in determining operating levels.

Conservative operations are particularly advisable for the petroleum industry, inasmuch as it would have no difficulty in keeping abreast of even any sharp rise that might occur in the demand for its products. While some industries must be concerned with their ability to meet possible sharply expanding demand, the oil industry could greatly expand output at wells and refineries merely by opening valves wider.

The present facts and circumstances that point the way for the industry's operations call for continued conservative regulation of crude production and refinery runs.

The crude oil markets are fairly steady, but in some districts the supplies exceed firm demand.

The markets for refined products also are generally stable, but in some instances prices are tending to sag.

Because of the widespread hopes for business recovery, improvement of demand for petroleum is expected. But so far, there has not been much definite evidence of any actual betterment of oil demand.

Oil Business Above Average

The petroleum industry's better than average showing during the recession was reflected in the latest report of the Department of Commerce on wholesale trade.

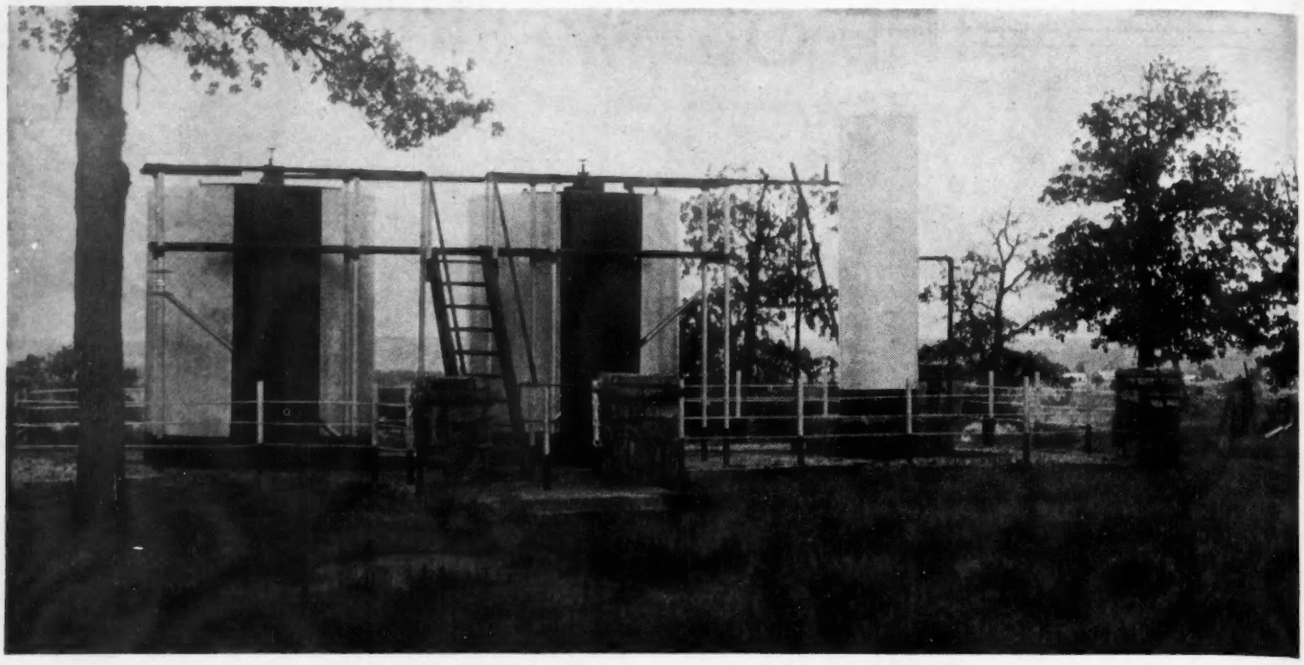
Only two lines of wholesale trade attained in the first six months of 1938 the sales volume of the first half of 1937. Sales of petroleum wholesalers increased 1 percent and tobacco distributors' sales showed no change.

Total wholesale trade in the first six months of 1938 was 15 percent lower than in the first half of 1937. The largest monthly decrease from 1937 occurred in April, when sales were down 18½ percent from the previous April. The best relative showing of the half year took place during January, when sales were down 12 percent.

The department pointed out that in interpreting the percentage changes from the first six months of 1937, it should be borne in mind that it was during that period that wholesale trade attained its highest levels in the last 8 years.

It was estimated that total wholesale trade during the first half of 1938 was at about the same level as during the corresponding period of 1936. (Sales during the first half of 1937 rose approximately 18½ percent over the first half of the previous year.)

Wholesale sales during June, 1938, were 16 percent



This twin battery of flow tanks and separator, on the highway between Oilton and Drumright, Oklahoma, has been set up by The Texas Company for the eight wells of the A. E. Reynolds lease.

The native stone foundation and corner posts were set up by the crew of roustabouts in spare periods, while the turning gate was made from spare pipe by the welding crew in the Cushing field, one of the world's outstanding crude oil sources.

The view is from the highway, from which hundreds of automobile travelers each day get evidence that a tank battery can be a thing of beauty.

below the level of last June, the same decrease as in May from May of 1937.

Industry Helping Build Up South

The petroleum industry is playing an important role in bringing about needed industrial and business development of the South.

The recent report to President Roosevelt by the National Emergency Council on economic conditions in that section of the United States described the region as one of the largest potential markets in the country, because of having at the same time valuable natural resources and other advantages but various unfavorable economic conditions that have prevented fulfillment of the business and industrial possibilities.

The resources include forests, minerals, rich agricultural lands, water power resources, coal, crude oil, natural gas. Other advantages include ample transportation facilities, rail, water, and air, and the varied climate.

Yet the South has inadequate capital of its own, and scarcity of local credit sources results in high interest rates. Wages are comparatively low, taxes are high, cotton is depended upon too largely in agriculture. The region is industrializing, but with difficulty and under handicaps, and is penalized for being agricultural. Consequently, purchasing power of the people does not provide adequate market for its own or outside industries.

The report indicated that the mentioned resources and advantages could make the South a tremendous trader with the rest of the nation, and that the South's growing population, with vast needs and desires, now largely unfilled, could keep a large part of the rest of the country busy supplying them. Thus the possibilities exist for benefiting both the South, on the one hand, and the rest of the country, on the other, through a building up of the South.

In the fulfillment of these desirable possibilities, the petroleum industry already is taking a leading part. Several states of the South and Southwest are producing a large part of the national output of crude oil and natural gas, manufacture much of the raw crude into finished petroleum products, have vast oil and gas pipe line industries, and are manufacturing centers for oil field and refinery machinery and equipment. And these states in which the oil and allied industries have become so important are among the fastest growing and most prosperous of not only the South but the whole United States.

The petroleum development already is bringing a partial fulfillment of the great possibilities envisaged in the report on the South.

Oil Industry Liberal With Vacations

A recent report of the Department of Labor gave further evidence that the oil industry is exceptionally liberal toward its employees. The bureau estimated that nearly two fifths of all wage earners in manufacturing industries are employed by plants having paid vacation plans. But in crude petroleum producing, 86 percent of the wage earners for which information was obtained were employed by firms that granted paid vacations. In petroleum refining, in 1937, more than 98 percent of the wage earners were granted paid vacations. The workers in the oil industry are faring better than those in most other industries as regards the vacations with pay.

Oil Industry Situation Good But Caution Is Needed

Surplus inventories being reduced and markets bolstered by curtailment of crude production and refinery runs, but oil demand still lags

By L. J. LOGAN, Associate Editor

CONDITIONS in the oil industry remain generally satisfactory, and the outlook continues moderately promising.

Oil consumption is holding up comparatively well, although it has not yet given much evidence of the improvement that is widely expected. Gasoline demand continues to run about the same as last year, and exports of both crude oil and refined products still are running well above those last year. But the recession still is adversely affecting demand for fuel oils and lubricants, in so far as those products are used in industrial production.

However, the petroleum industry some months ago gave ample recognition to the prevailing trends of oil consumption, drastically curtailing crude oil production and refinery runs; and it still is holding operations down in line with the market requirements for crude and products.

Allowables Relatively Low

Crude production allowables were somewhat liberalized in July, but they still remained relatively strict, and by virtue of them, the industry was able to reduce crude oil stocks about 3,000,000 barrels and gasoline stocks about 4,000,000 barrels during the month. Consequently, the inventory situation at the beginning of August was relatively good, although the stocks of heavy fuel oils were too large.

In August the allowables are only slightly less strict than in July, and it is promised, therefore, that further improvement will be made in the inventory situation.

Operations Are Moderate

Crude oil production has been running in the past few weeks nearly 10 percent under the corresponding levels last year, and refinery runs have been slightly lower than in 1937; and these operations at both wells and refineries have been about in line with indicated desirable proportions.

Gasoline stocks in the first half of August showed normal seasonal decreases, having declined about 1,500,000 barrels in the week ended August 6 and 1,000,000 barrels in the week ended August 13. On the latter date, the total inventories in the United States amounted to 74,387,000 barrels. That was 7.6 percent more than the supply of 69,087,000 barrels on hand one year previously. That increase from a year ago is not justified, inasmuch as gasoline demand has been only about the same this year as last year. But the 7.6 percent excess over a year ago is gratifying when it is considered that several months ago the gasoline supply was holding around 20 percent above the previous year's levels. The present level of gasoline storage has been achieved only through protracted curtailment of crude production and refinery runs, and in retrospect, the current supply appears comparatively moderate, although further withdrawals are needed.

Fuel Oil Situation

Still causing some concern is the fuel oil situation. Inventories are exceptionally large, and as no appreciable improvement in demand has occurred, they continue to increase materially, although the additions to storage are at least partially seasonal.

Total fuel oil stocks increased about 400,000 barrels in the week ended August 6 and over 1,500,000 barrels more in the week ended August 13. On the latter date they totaled 146,261,000 barrels, or 33.3 percent more than on the corresponding date last year. Yet fuel oil demand lately has been more than 10 percent below last year's levels.

Conservative Course Needed

In view of the present large supplies of fuel oil in storage, it would be desirable for the industry to be exceptionally conservative this fall and winter in its refinery operations and for the state conservation officials to be similarly conservative in determining crude production allowables. For in recent years the demand for fuel oil was brisk and stocks were relatively small as the heavy consuming period of fall and winter opened, and fuel oil output and crude production were maintained at relatively high levels. But this year the situation is reversed, demand being less favor-

able and stocks large, calling for moderate fuel oil production and refinery runs.

Furthermore, the fuel oil situation is directly related to the gasoline situation, and a conservative attitude in taking care of next fall and winter's fuel oil requirements would benefit not only the fuel oil market but also the gasoline situation.

In several recent years, including last year, the industry has been obliged to increase gasoline storage to excessive levels in fall and winter, in carrying on sufficiently active refinery operations to meet the prevailing or expected demand for fuel oil. And the gasoline market in consequence suffered.

This year, in contrast, such forced turning out of gasoline, because of the fuel oil requirements, apparently will not be necessary. Holding of gasoline stocks at desirable levels consequently should be less difficult than heretofore, and maintenance of stable gasoline markets should be facilitated, if ample recognition is given to the fuel oil situation.

Markets Generally Steady

Concrete evidence that the industry continues in sound condition is furnished by the recent trends of the markets for crude and refined oils.

In several districts of the country the crude oil markets have been unsteady in recent weeks, but no general marking down of postings has been seriously threatened since early May, when drastic curtailment restored market stability. Several local reductions have occurred, including the recent one in Illinois; and the crude markets have been locally weak in East Texas, North Texas, and South Oklahoma. But it now is promised that postings may be generally maintained for the remainder of the year, if production continues in line with demand.

The prices of refined products also are generally steady, after having improved some in the past few months. Both the tank car and tank wagon prices of regular grade gasoline now average about one-half cent a gallon less than at this time last year. Earlier in the year, before improving, the prices did not show this favorable a comparison with a year ago, because of their sharp decline last fall and early winter.

Demand Outlook Good

Present expectations regarding oil consumption are somewhat more hopeful than those of recent months, although there has not occurred yet much evidence of actual improvement.

In its forecast of demand for August, the Bureau of Mines was more optimistic than a month before over the outlook for gasoline. The bureau estimated that domestic demand for gasoline in August, 1938, would be 8/10 of 1 percent larger than in August, 1937; whereas the similar forecast for July had contemplated a 1.3 percent decrease from July, 1937.

The bureau predicted continued heavy exports of gasoline, estimating that shipments in August, 1938, would be 19.3 percent larger than in August, 1937.

The total gasoline demand in August, domestic and foreign, was expected, therefore, to be 2.1 percent larger this year than last year.

That was the most optimistic forecast of gasoline demand made by the Bureau of Mines since it predicted a 2.2 percent increase for May of this year over that month last year. (For June and July the bureau had expected both domestic and total demand to run lower than last year, and its estimates were about fulfilled at least for June.)

Total Oil Demand

Detailed figures now are available on actual demand during June and thus for the first half of this year. But they do not embody any strong evidence of an upturn in oil consumption, although slightly better demand for some products was indicated.

The total demand for all oils in June was 2.7 percent smaller than in June of last year. That was exactly the same decline from a year before that had been shown in May, and was larger than the 1.2 percent decrease registered in April.

For the first six months of 1938, the total demand for all oils was 7/10 of 1 percent smaller than in the similar period last year. Thus

Bureau of Mines Forecasts Reflect Trends of Demand

(Barrels of 42 U. S. Gallons)

MONTH	Total Demand for Domestic Crude	MOTOR FUEL DEMAND		
		Domestic	Export	Total
Bureau of Mines Forecasts				
January:				
January, 1938, forecast	105,610,000	36,500,000	3,800,000	40,300,000
January, 1937, actual	99,442,000	33,696,000	2,978,000	36,674,000
Change from year ago	+6.2%	+8.3%	+27.6%	+9.9%
February:				
February, 1938, Forecast	96,270,000	32,550,000	3,200,000	35,750,000
February, 1937, actual	89,817,000	32,000,000	2,640,000	34,640,000
Change from year ago	+7.2%	+1.7%	+21.2%	+3.2%
March:				
March, 1938, forecast	105,150,000	40,680,000	3,600,000	44,280,000
March, 1937, actual	99,738,000	40,561,000	2,426,000	42,987,000
Change from year ago	+5.4%	+0.25%	+48.3%	+3.0%
April:				
April, 1938, forecast	100,850,000	44,500,000	3,300,000	47,800,000
April, 1937, actual	98,565,000	43,409,000	2,787,000	46,196,000
Change from year ago	+2.3%	+2.5%	+18.4%	+3.5%
May:				
May, 1938, forecast	102,860,000	46,800,000	3,100,000	49,900,000
May, 1937, actual	106,857,000	35,484,000	3,333,000	48,817,000
Change from year ago	—3.8%	+2.9%	—7.0%	+2.2%
June:				
June, 1938, forecast	100,000,000	48,100,000	3,400,000	51,500,000
June, 1937, actual	105,274,000	48,580,000	3,085,000	51,665,000
Change from year ago	—5%	—1%	+10.2%	—0.3%
July:				
July, 1938, forecast	105,340,000	49,930,000	4,000,000	53,930,000
July, 1937, actual	111,387,000	50,704,000	2,962,000	53,666,000
Change from year ago	—5.4%	—1.3%	+35.0%	—0.5%
August:				
August, 1938, forecast	106,580,000	50,000,000	4,500,000	54,500,000
August, 1937, actual	113,148,000	49,597,000	3,771,000	53,368,000
Change from year ago	—5.8%	+0.8%	+19.3%	+2.1%
***Oil Industry Forecasts**				
Monthly:				
July, 1938, forecast	106,900,000	50,440,000	3,770,000	54,210,000
July, 1937, actual	111,387,000	50,704,000	2,962,000	53,666,000
Change from year ago	—3.5%	—0.5%	+27.6%	+1.0%
Quarterly:				
Third quarter, 1938, forecast	318,010,000	148,370,000	11,250,000	159,620,000
Third quarter, 1937, actual	335,500,000	147,550,000	11,190,000	158,740,000
Change from year ago	—5.2%	+0.5%	+0.5%	+0.5%

* Represents a compilation of the estimates of representatives of industry associations, oil companies, and petroleum economists, submitted at the request of the Bureau of Mines.

Oil Demand Holding Up Relatively Well, Although Still Showing No Definite Upturn in June

(These figures on petroleum demand, in thousands of barrels, and from the Bureau of Mines)

ITEM	APRIL COMPARISON			MAY COMPARISON			JUNE COMPARISON			YEARLY COMPARISON		
	April, 1937	April, 1938	Percent Change	May, 1937	May, 1938	Percent Change	June, 1937	June, 1938	Percent Change	First 6 Mos., 1937	First 6 Mos., 1938	Percent Change
Total Demand	108,594	107,298	— 1.2	111,735	108,659	— 2.7	113,122	109,995	—2.7	639,629	634,548	— 0.7
Exports—												
Crude petroleum	4,899	7,553	+54.1	6,796	7,798	+14.7	6,181	7,424	+20.1	28,445	40,177	+41.2
Refined products	8,763	10,427	+18.9	9,404	10,681	+13.6	8,771	10,338	+17.8	48,623	57,243	+17.7
Domestic Demand—												
Motor fuel	43,409	43,254	— 0.3	45,484	44,911	— 1.2	48,580	48,293	— 0.6	243,730	244,754	+ 0.4
Kerosene	4,465	4,333	— 2.9	4,150	3,637	—12.4	3,259	3,257	— 0.06	26,183	26,754	+ 2.1
Gas oil and distillate fuels	8,171	7,800	— 4.5	6,806	7,050	+ 3.5	6,295	5,490	—12.7	57,500	55,120	— 4.1
Residual fuel oils	27,709	22,279	—19.6	26,356	22,447	—14.8	26,060	22,278	—14.5	165,269	142,171	—13.9
Lubricants	2,224	1,591	—28.5	2,078	1,730	—16.7	2,039	1,606	—21.2	12,000	9,904	—17.4
Wax	109	101	— 7.3	79	92	+16.4	88	85	— 3.4	536	565	+ 5.4
Coke	399	373	—21.5	524	422	—19.5	374	573	+53.2	2,662	2,567	— 3.5
Asphalt	1,610	1,654	+ 2.7	2,293	2,203	— 3.9	2,674	2,675	+ 0.04	9,771	9,936	+ 1.6
Road oil	230	208	— 9.6	724	593	—18.1	1,321	1,274	— 3.5	2,876	2,525	—12.4
Still gas	5,025	5,073	+ 0.9	5,539	5,542	+ 0.05	5,333	5,387	+ 1.0	29,745	30,268	+ 1.7
Miscellaneous	172	166	— 3.5	191	143	—25.1	206	157	—23.7	1,160	872	—24.8
Losses	1,409	2,546	+80.7	1,311	1,410	+ 7.5	1,941	1,158	—40.3	11,129	11,692	+ 5.0
Total domestic demand	94,932	89,318	— 5.9	95,535	90,180	— 5.6	98,170	92,233	— 6.0	562,561	537,128	— 4.5

for this year as a whole, oil demand has been about the same as it was last year.

Export Business Up

Exports of both crude oil and refined products have continued well above last year's levels. Shipments of crude were 20.1 percent larger in June, 1938, than in June, 1937, and those of refined products were 17.8 percent larger.

For the first six months of 1938, the crude oil exports were up 41.2 percent and those of refined products were up 17.7 percent.

The June figures indicated that there had been a tapering off of crude oil exports but that refined oil shipments were being maintained consistently.

Total Domestic Demand

Total domestic demand for petroleum products was a little less favorable in June than in the two preceding months, having been 6 percent smaller than in June, 1937, whereas May showed a decrease of only 5.6 percent from a year previously and April a 5.9 percent decrease.

For the first six months of 1938, total domestic demand was 4.5 percent smaller than in the corresponding period of 1937.

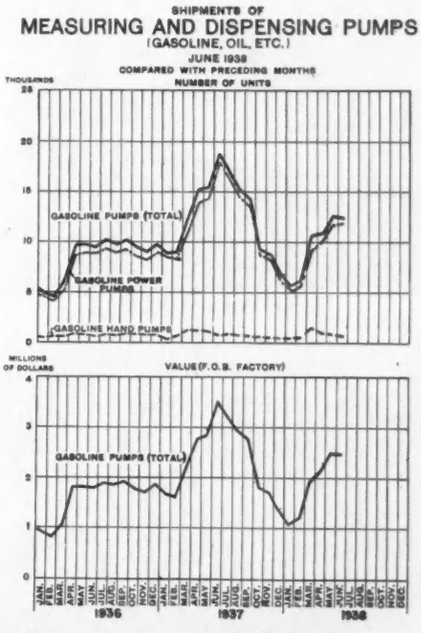
Gasoline Use High

Consumption of gasoline made a better showing than that of most of the other products, for both June and the six months. The domestic demand for motor fuel was 6/10 of 1 percent lower in June, 1938, than in June, 1937, having been a little better than in May, when a year to year decrease of 1.2 percent was indicated.

For the first six months of 1938 the domestic demand for motor fuel was 4/10 of 1 percent larger than in that period last year, the consumption having held up relatively well in the early months of this year.

Kerosene Consumption

Kerosene consumption has held up even better than that of gasoline. Domestic demand in June was practically the same this year as last year, and for the first six months it showed a 2.1 percent increase.



Shipments of gasoline dispensing pumps continue to run about one-third lower than last year but considerably higher than in 1936.

The Department of Commerce has reported that gasoline pumps valued at $2,479,556 were shipped during June, 1938, as compared with shipments valued at $3,545,172 for June, 1937. Oil and grease equipment and other measuring and dispensing pumps valued at $213,649 were shipped in June, 1938, as against shipments valued at $338,266 in June, 1937.

Fuel Oils Suffer

This year has brought declines in consumption of both the lighter fuel oils, used in domestic heating, and in the heavier oils, employed in industrial production, although the decreases have been larger for the latter grades.

The domestic demand for gas oil and distillate fuels was 12.7 percent off from a year before for June, although down only 4.1 percent for the first six months as a whole.

Domestic demand for residual fuel oils in June was 14.5 percent lower than in June, 1937, having lagged to about the same extent as in May; and for the first six months, a decrease of 13.9 percent was indicated.

Other Products

Like the industrial fuel oils, lubricants have suffered materially from the recession. Domestic demand was off 21.2 percent for June, as compared with 16.7 percent in May, and was down 17.4 percent for the first six months.

Wax consumption in the United States was down slightly for June, compared with June, but for this year as a whole was up 5.4 percent.

Asphalt demand also has been a little better this year than last year, although June requirements were about the same in 1938 as in 1937.

Road oil demand in this country was off 3.5 percent in June and 12.4 percent for the first six months.

Derrick Skidding Now Highly Skilled Art

The "sled runner" type of derrick skid is shown here. Two 8 by 10 timbers 26 feet long are used on each side, with tapered shoes and steel plates to give the proper sliding action. These skids are not an integral part of the derrick, and it is necessary to jack up each side of the derrick before attaching them.

A close-up of one of the four steel skid shoes used as one type of skidding medium. These shoes are tapered like saucers, are 10 feet by 10 feet on top and 7 feet by 7 feet on bottom. They are permanently attached to the derrick and serve as foundations. This picture was taken a few minutes before skidding started. During drilling operations the skid plate sank into the ground slightly.

Two tractors are used here to place the derrick in correct position to pass over the Christmas tree and flow connections. This derrick is being moved on sled type skids.

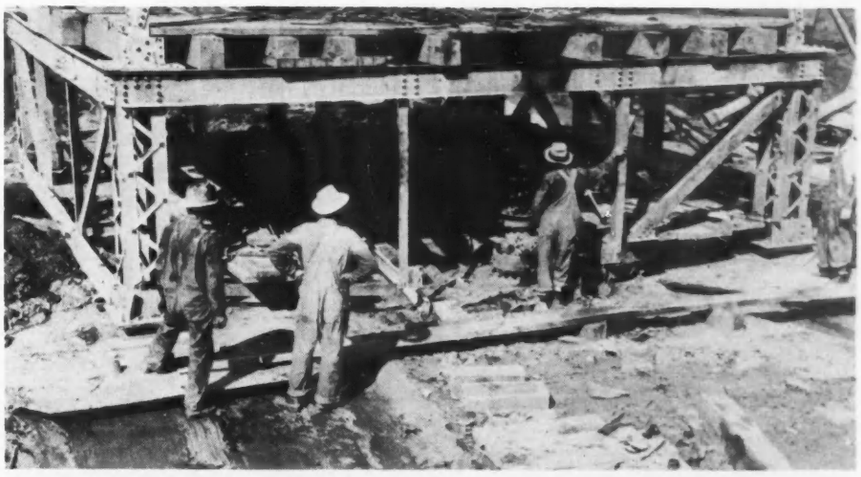
By BRAD MILLS
Associate Editor

AN efficient derrick-skidding method has been developed by Humble Oil & Refining Company, with the movement of the erected derrick and substructure as one unit being the company's accepted practice along the Gulf Coast. The use of special skid shoes designed for the reduction of friction, heavy tractors for pulling the derricks, and simple well foundations have made an easy job of transferring a derrick intact from one location to another in various fields. The practice until a few years ago was to dismantle a derrick for moving a distance of more than a few hundred feet. Derricks moved only from one short location to another were laboriously skidded on rollers at a considerable cost and loss of time.

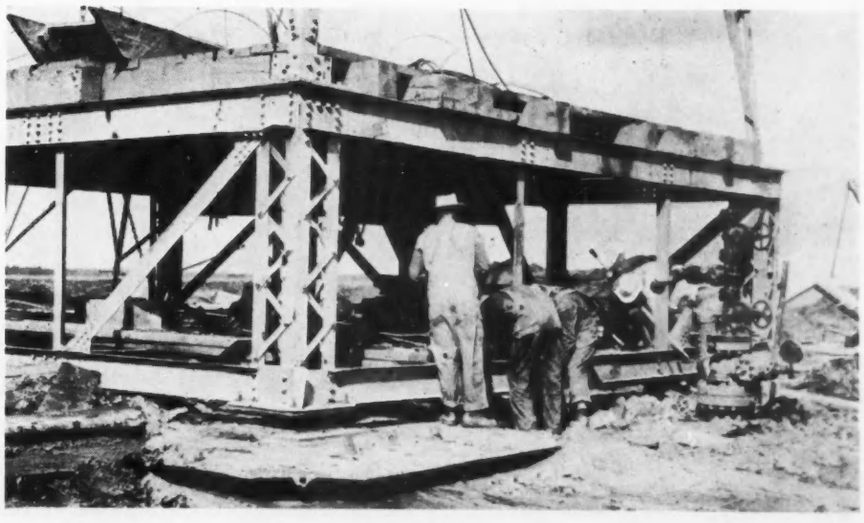
Two Types of Skids

One type of foundation used for skidding derricks was designed primarily for the placement foundation, and the idea of skidding was an afterthought. The level nature of the average Gulf Coast field makes possible long moves with little change in terrain. Ditches, levees and roads offer problems, but a derrick is a much more stable object than is suspected generally. Theoretically it would be necessary to raise a derrick six feet on one side before it would turn over, but no heavy risks are taken. Rice levees, roadways and natural mounds are skidded over with little difficulty, but where there is any question as to safety, timbers are used to build up the low places. Ordinary rough places cause no trouble at any time.

Two types of skids have been de-

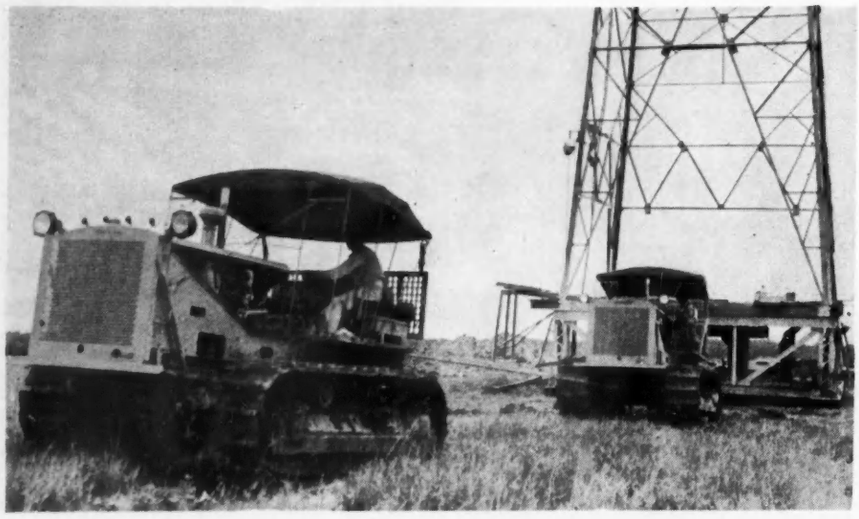


Here the derrick has been skidded a few feet and the men have removed the lower cross member of the sub-structure to permit the Christmas tree to pass through. The smear created by the steel skid shoes may be plainly seen on the ground.

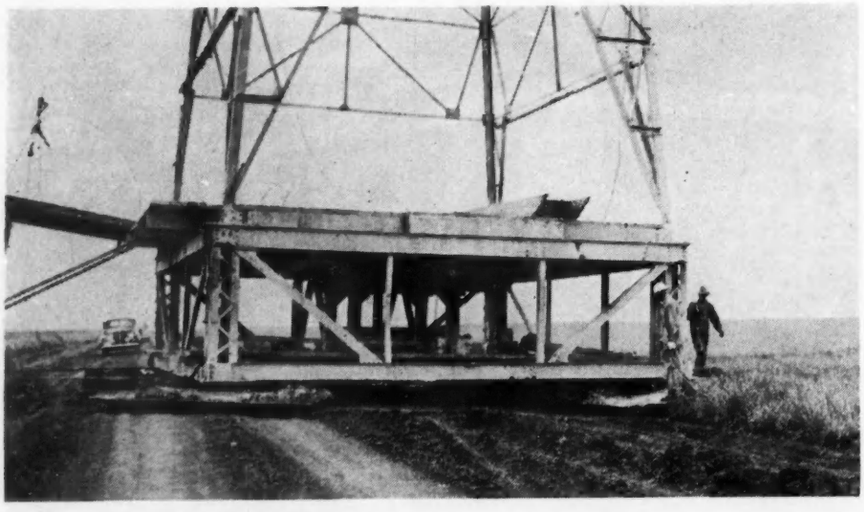


The Christmas tree has been safely cleared and the sub-structure cross member is being re-attached. The sliding action of the steel skid shoes may be plainly observed.

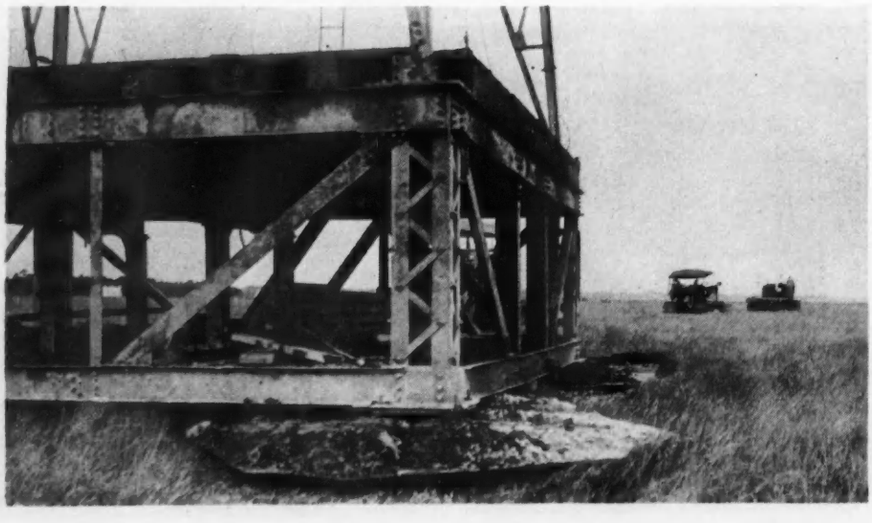
The procedure for clearing the Christmas tree with the sled runner type skids is the same as with the steel skid plates. Here the men are re-bolting the cross member of the sub-structure in place after the derrick has ben skidded a short way. The man on the left has one foot on the rear shoe. The furrow made by the skid runner is plainly visible.



Two heavy tractors easily pull a 122-foot derrick on sled type skids. This picture shows the beginning of a 3000-foot move that required less than an hour. The tractors are hooked for "straight pull."



Here is derrick skidding under almost ideal conditions. Two tractors are pulling the derrick across the ground at Friendswood at a rapid clip. The man riding has no fear of the outcome. This derrick is equipped with sled type skids.



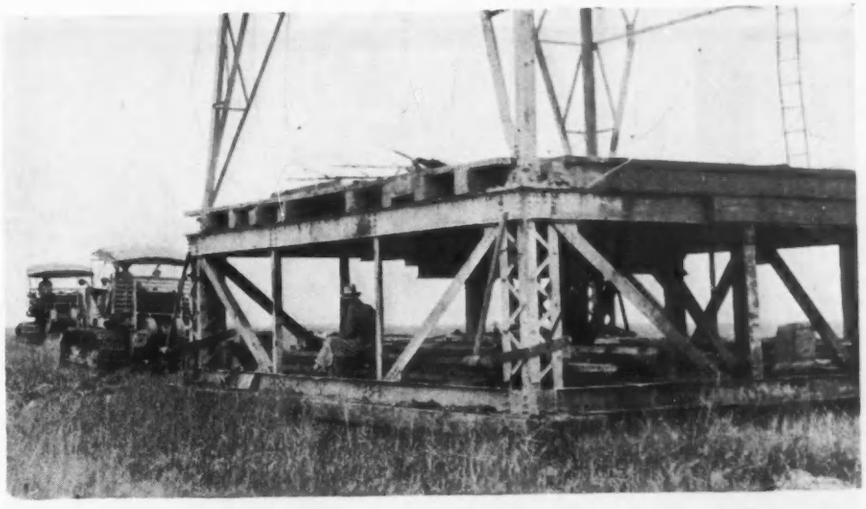
Here is an excellent view of the steel skid shoes in motion. They are pretty hard on the heavy growth of grass, but hardly disturb the ground. The two tractors are aided by a heavy truck shown in front. This derrick was skidded 4000 feet in 1 hour and 40 minutes. One road was crossed.

veloped, and both are good skidding mediums. One is built onto the derrick to form part of the foundation, while the other type is slipped under the derrick for the skidding operation.

The type that is a permanent part of the derrick consists of four "skid plates" that are also foundations for the four derrick corners. They are tapered up on all four sides like a saucer, but the taper or curve is only 6 inches thick. These skid plates are made square at the top and bottom, except for small sections of the corners that are cut out on the top side. They measure 10 feet by 10 feet on the top side, and 7 feet by 7 feet on the bottom side. The area of the plate actually in contact with the ground normally is 49 square feet. Each skid plate is connected onto the bottom of the derrick corner with a ball-and-socket joint, and the skid plate is free to turn, in addition to having a free side motion that gives a fair adjustment on minor dips and bumps. If the derrick were suspended in the air, it would be possible to spin the skid plates around with the hand, and to raise each one up and down at the edge in any position from level. Each plate is free to "wabble" while skidding and making adjustments on uneven surface spots, the ball-and-socket joint accounting for the flexibility. They are made of heavy plate steel, and are hollow except for strong reinforcing of short sections of drill pipe. They were originally made with three knobs for pulling, but recently the company found it more effective to pull from the base of the derrick and allow the skid plates to remain free to turn in any direction. Before the derrick is skidded to the new location, heavy boards are placed on the ground to support each skid plate. The derrick is stopped so that each skid plate rests squarely on the heavy boards. This arrangement gives a quick and simple foundation, and only a few minutes are required to complete the arrangement after the derrick arrives. The tractors pull the skids and derrick in

line after they have cut loose from the main skidding effort.

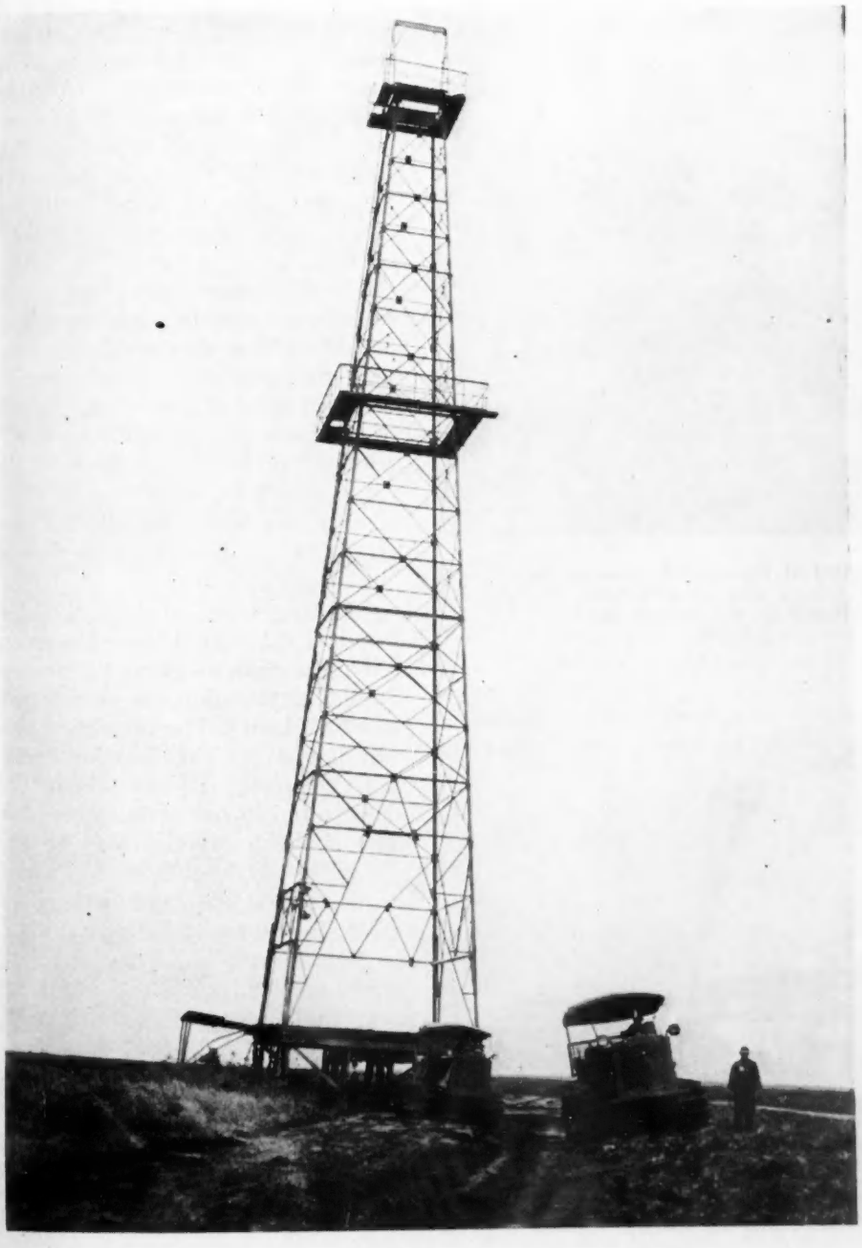
During drilling operations, the weight and vibration cause the steel skids to sink slightly, but the first pull of the tractors seldom fails to "jump" the skids out of their resting places and onto the firm ground. The ground under the skid plates usually is slick and wet enough to offer a good start when the tractors give their initial pull. During actual skidding operations, each plate wabbles along the way enough to offset minor ground irregularities. While crossing a road or small ditch, a skid plate will point downward on one side and upward on another while forcing an adjustment, yet the derrick may remain almost vertical.



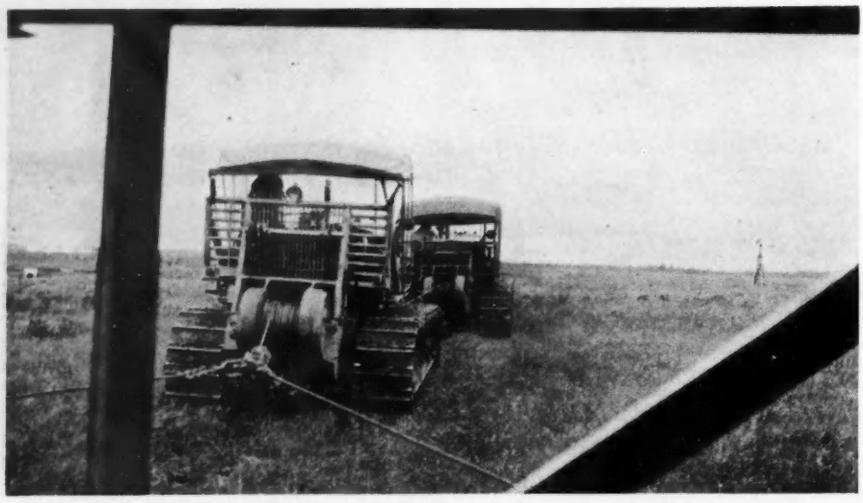
Crossing a road with the steel skid shoes is not a difficult task. The different adjustments of the shoes may be seen. This crossing was made in less than 10 minutes.

Another skid used by the company and one offering a number of advantages is the heavy timber or "sled runner" type. This skidding medium consists of two 8-inch by 10-inch timbers on each side of the derrick, tapered wood shoes on each of the four ends, and iron plates covering the four tapered shoes. The heavy timbers are placed together on each side, and the tapered shoes and steel plates provided on all ends to give a runner effect. The iron plates are used to prevent untimely wear of the tapered ends, and the derrick may be pulled in either of two directions. This type of skid requires much less power for skidding than the skid plate type, and one heavy tractor has under ideal conditions pulled a derrick from one location to another. These skids, however, are not an integral part of the derrick foundation, and it is necessary to jack up the derrick and attach them in place prior to each skidding operation. When attached they somewhat resemble sled runners, but the increased thickness of the tapered shoes on each end tend to protect the greater section of the 8 x 10's between the shoes. In the sandy areas it often is necessary to use rollers. Under such conditions oak timbers or steel shoes are used to prevent severe wear.

A derrick skids much better in mud

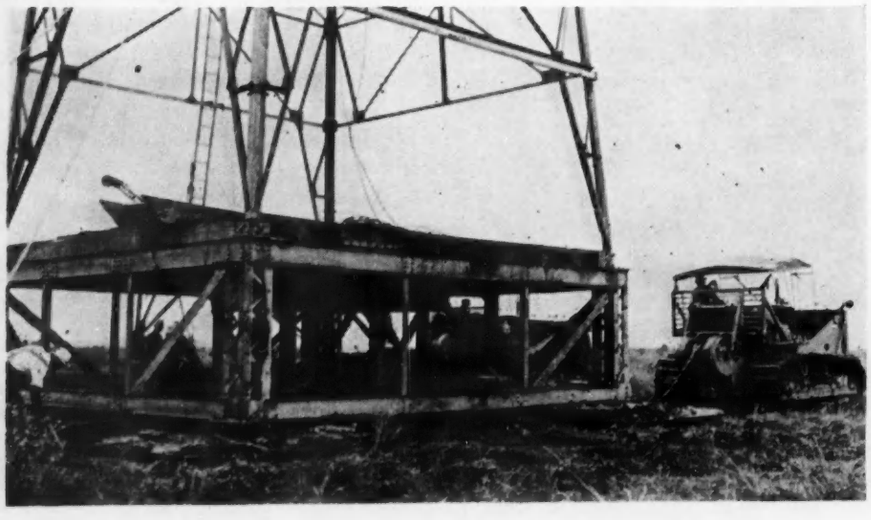


The road shown here was not entirely crossed, but it was necessary to include part of the road for a short distance in going around a deep ditch. Timbers were placed in the side ditch for safety, but the tilt probably was not dangerous. Sled type runners were used on this job.



The photographer was riding on the sub-structure when the picture was taken. The pull and winch arrangement may be seen to advantage.

The ground crew makes ready for the arrival of the derrick. This particular type of foundation supports the conventional derrick and sub-structure. Timbers and mats are used to bring the support to the ground level.



Here the main skidding is finished and the derrick is being jockeyed into the correct position at the new location. Timbers were placed in position at the four corners to support the steel skid shoes that act as the principal foundation.

than on dry ground. The field men always hope for rain prior to a skidding job. Heavy grass is also a good skidding medium. A hard dry soil is not very satisfactory, while a sandy soil always gives trouble. Such Gulf Coast fields as Friendswood and Hastings offer a heavy loam soil that is satisfactory when soft or wet.

One large crawler type tractor and winch provides enough power to move a heavy derrick under good conditions, but two tractors give a better combination. Three tractors on a "straight" pull basis are often required where the soil is dry. In close places and during hard pulls, the winches are extensively used.

Substantial Saving

The time required to place the derrick in order for skidding is from 14 to 16 hours. The actual skidding time ranges from 40 minutes to three hours, the movement depending chiefly on the nature of the soil and terrain. Under good conditions it is possible to skid a derrick one mile in an hour. Skids of more than three miles have been made without trouble.

The Christmas trees at producing wells are completed low enough to permit skidding the derrick floor over the flow assembly. After the derrick has been skidded a few feet, one side of the lower sub-structure section is removed to prevent damage to the Christmas tree. After the flow assembly has been cleared, the sub-structure section is replaced and skidding continued.

The time saved by skidding a derrick is a substantial item. Under the old dismantling program, the time required to tear down a derrick was about 12 hours. The rebuilding time was 2½ days. The skidding operation complete requires about two days, a saving of at least one day. The skidding practice may be employed in any level field. The nature of the soil is the chief determining factor in cost and skidding time.

Reclamation of Partially Depleted Oil Pools

IN SOUTHEASTERN KANSAS

By C. C. CARLISLE, Petroleum Engineer, Independence, Kansas

FROM the time of the first oil development in southeastern Kansas in 1860 to about four years ago the shallow operator drilled and produced, and gradually depleted his production by whatever method and manner seemed most suited to conditions. Today that is changed. Secondary recovery is entering the older areas, and with it goes the necessity of carefully protecting large investments, far greater than those made by the earlier operators.

Since active commercial development started about 1903 some pools have been exhausted by normal production methods and have subsequently been abandoned. Other pools have been producing steadily. Gas reserves in the entire area are practically gone, present supply being insufficient for local demands.

Important Formations

Without going into involved detail, the formations with which the secondary recovery operator has to deal, consist mostly of alternate beds of limestones and shales with a few sandstone lenses with the limestones predominate. The principal oil bearing formations of the Pennsylvanian series in this region, enumerated from upper to lower are: Redd sand, Wayside sand, Weiser or Peru sand, Fort Scott or Oswego lime, Squirrel sand, Bartlesville sand and Burgess sand. The Redd sand is fairly permeable and when containing oil is a good producer. The Wayside sand is fairly tight, fine-grained and with lime cementing in some portions of the core column. This sand is usually laminated with strata of shale and thin wafer-like layers of mica flakes. It may be well saturated with oil of about 30 gravity A.P.I. In Montgomery County, Kansas, this sand is the most extensive producer.

Where both Wayside and Weiser (Peru) sands are present, the Weiser lies about 150 feet below the Wayside. The Peru sand is the principal producer in Chautauqua County, Kansas, where it is nearly as tight as the Wayside in Montgomery County, but in this latter county it is more permeable.

The Fort Scott limestone (nearly always called Oswego) lies in two strata separated by four to ten feet of black shale. The upper stratum consists usually of from four to thirty feet of hard white limestone, while the lower member is generally composed of blue limestone, ranging from five to eighteen feet in thickness. This formation usually carries gas, although sometimes oil produces from a zone near the top of this lower member. The gas is nearly always accompanied by water which must be drawn off. This is a long time gas producer if water is removed as it comes into the well. A few feet below the Fort Scott lime is sometimes found a sand called Squirrel sand. If oil bearing it is usually a good producer.

The Bartlesville sand lies approximately 330 feet below the Fort Scott or Oswego lime. This sand averages a little more than 30 feet in thickness, is coarse grained and is fairly permeable. It is the principal gas producing sand in southeastern Kansas, yet, in many pools, it produces considerable green oil of from 30 to 38 gravity A.P.I. Most oil produced in Nowata County, Oklahoma, comes from this sand.

Often resting unconformably upon the Mississippi lime and about 100 feet below the Bartlesville, lies the Burgess sand. Usually this is in small lenses and apparently was deposited in pockets, or irregular depressions, in the top of the Mississippi lime, which had been very irregularly eroded before the deposition of the Pennsylvania series. Burgess sand nearly always carries gas and while such gas lasts, is a large producer.

The prevailing opinion is that where sands are partially saturated with oil, especially where but little if any water is present, that the percentage of saturation is greatest

near the bottom of the sand bed. However natural this supposition may be, it is erroneous, as shown by saturation curves plotted from analyses of sand cores. The analyses show about the same percentage of saturation at the top as at the bottom of the sand, demonstrating that when the gas has been released from an oil producing formation, the oil remains dormant and will not move unless displaced by water or by injected gas or air. Even where the vertical permeability is high, the oil will not settle to a lower level or move perceptibly in sand by force of gravity.

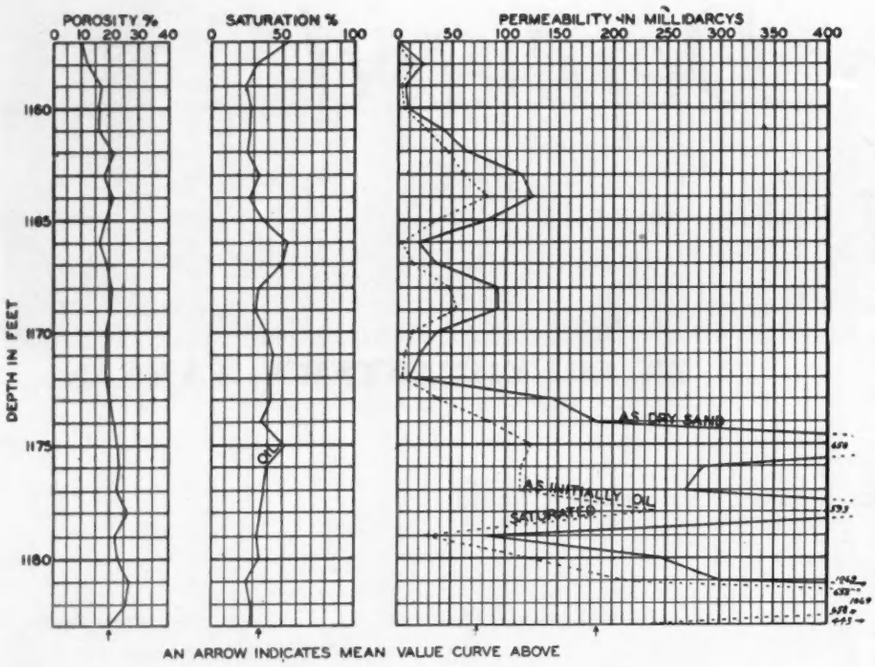


FIGURE 1
Well core analysis of the Bartlesville sand.

Initially, the voids or interstices of the producing formations are filled with gas, oil or water or a combination of these fluids. The oil pools of the Pennsylvanian series in this region are usually closed, therefore when oil and gas are withdrawn, water seldom follows.

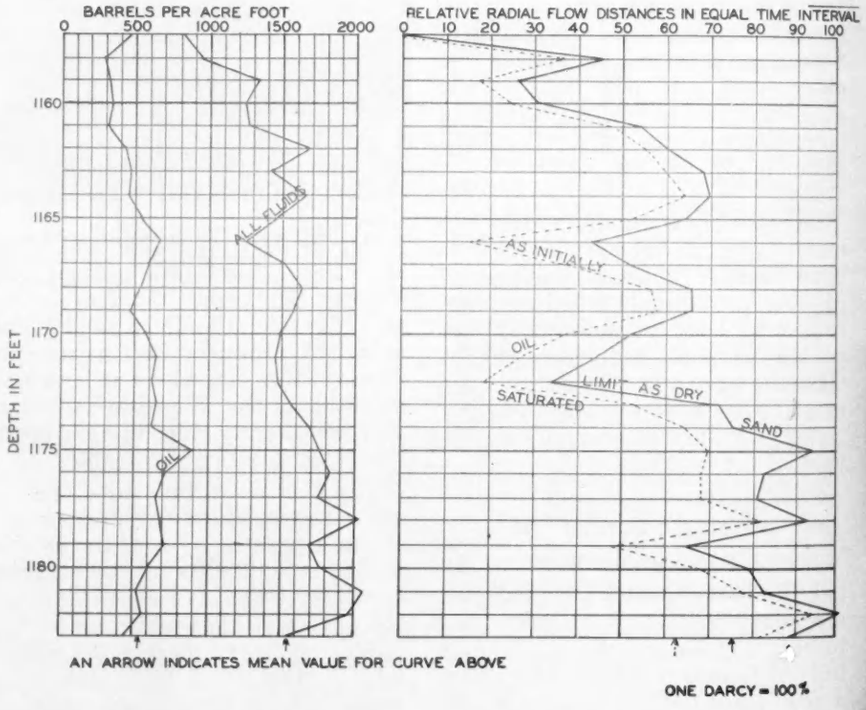
Prospects and Activity

Many oil properties abandoned as depleted and others considered partially depleted have much oil remaining in the sand. A core recently pulled from a lease considered nearing depletion revealed that over 45,000 barrels oil crude remained in storage per acre in a highly permeable sand. While this is exceptionally rich there are other abandoned tracts that would readily respond either to repressuring or to flooding. Some of the tracts have between 9000 and 25,000 barrels to the acre. By the application of modern production methods more oil can be removed than has heretofore been obtained through pumping alone.

In some instances, casing corrosion has permitted water from an upper sand to break through into wells and start an imperfect water drive. After several weeks or months the production of adjacent stripper wells may begin to increase from a fraction of a barrel to several barrels per day per well. One almost depleted well in the Peru sand was reported to have increased gradually to over forty barrels per day, then to have slowly decreased to twenty barrels per day over a period of five years and is still producing with no water yet appearing.

When water finally takes a well through this method of operating, the casing is perforated near the bottom and water from an upper sand is allowed to aid in the flood to other stripper wells. Instead of perforating the casing, some operators raise the string. This method has the disadvantage of allowing mud from behind the casing to flow in and partially, if not entirely, cover the face of the sand.

In a few instances in a small way, some operators are injecting water by gravity or by force pumps into certain selected depleted oil wells without conforming to a well-spacing pattern. While profitable results are being obtained, much oil may be bypassed or pocketed by this method, thereby preventing its recovery later by systematic water flood or by repressuring.



Where the field is small and the operator cannot obtain capital necessary to install and operate a systematic water flood or repressuring project and where the production has declined beyond the economic

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pumping limit, the method of stimulating the oil flow, as stated above, has been justified; since by these improvised or self-started floods several thousand more barrels of oil have been recovered than could have been obtained by the ordinary pumping method. Before water flooding of any kind or any repressuring system is started, permission must first be obtained from the state corporation commission, also before any well is drilled or plugged, the commission must first approve.

A number of water flood projects in this region and in northeastern Oklahoma are being operated at this time. These projects have been carefully planned and are being systematically developed and carefully operated, which is essential if the projects are to be profitable. Repressuring with air or gas is being done in quite a number of pools of the Mid-Continent fields. Many of the projects are small and often have but one gas engine-driven compressor forcing gas or air into selected oil producers. Usually, these improvised systems have increased the oil production, even though the correct pressures to be held on the intake wells are only estimated. In a few instances some new wells have been drilled at selected locations for the introduction of pressure.

As there are a few carefully developed water flood projects, so there are a few properly developed repressuring projects in the Mid-Continent, where the correct volumes of gas or air are being carefully determined for and are being supplied to the pressure wells. Several of these projects have repaid the capital invested and are earning handsome profits.

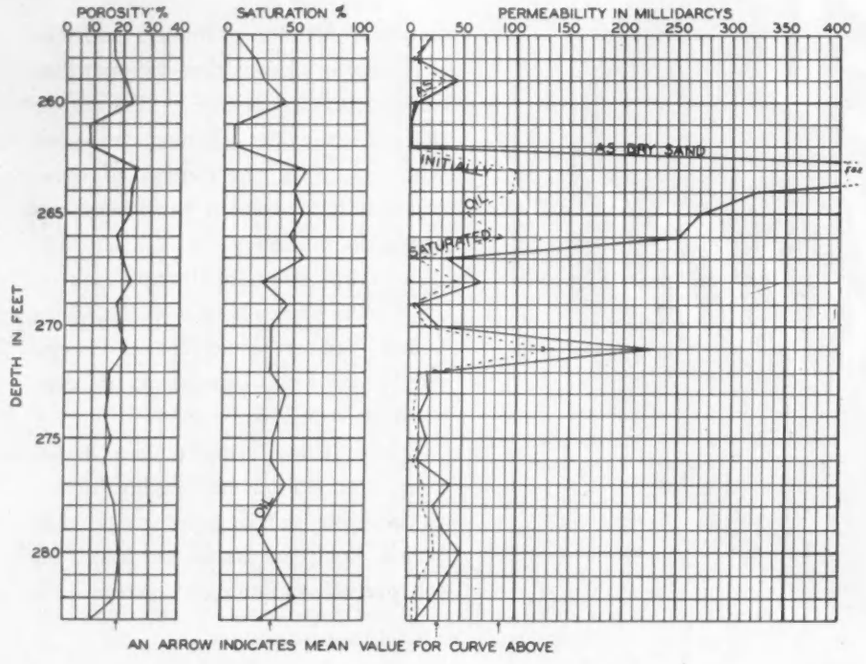
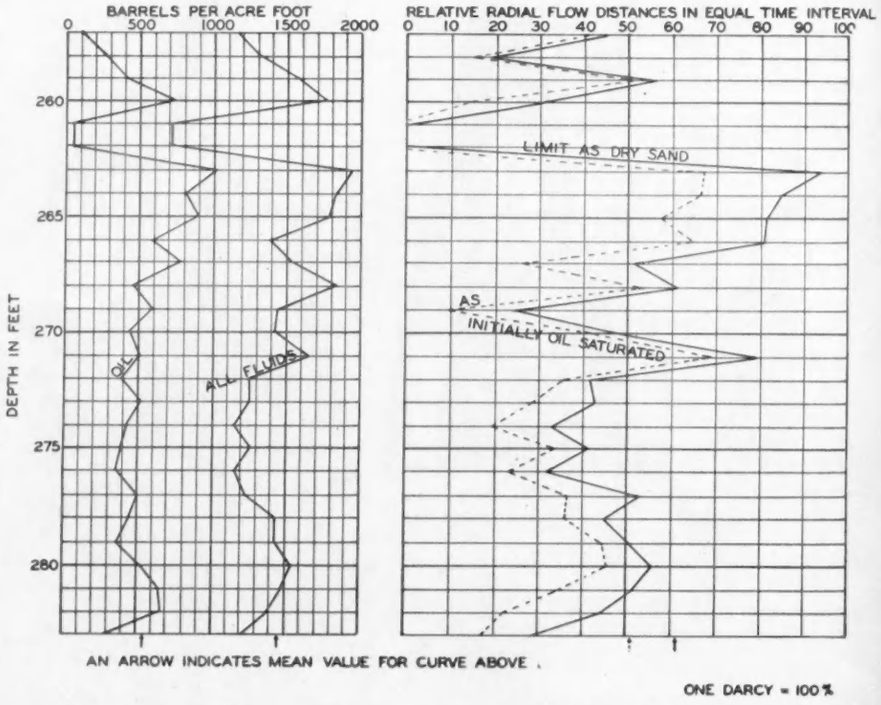


FIGURE 2
Well core analysis of the Weiser (Prue) sand.



The principal advantage claimed for water flooding of an oil sand suitable for flooding, over repressuring with air or gas, is that the oil can be obtained in a much shorter period of time and the investments and profits therefrom will be released so much sooner for other investments.

Some of the principal advantages of repressuring over flooding are: (1) the development cost is much less, seldom amounting to one-third of that for flooding; (2) pocketing of oil by by-passing is not so apt to result; (3) if for any reason operations are temporarily suspended on account of proration or for temporary cessation in oil purchases, the producing wells can be shut in for an extended period without reducing the ultimate production. With producing wells closed, the pressure plant can be operated continuously for many months by injecting gas or air into the oil sands, thereby rebuilding the pressure towards the original rock pressure, so that when the producing wells are again put into operation, they will produce at an increased rate until the total volume of oil accumulates to that which would have resulted had such wells not have been closed.

For flooding or repressuring, the ideal sand should be of fairly uniform permeability—a condition not found in southeastern Kansas or in northeastern Oklahoma. These sands are usually interspersed with thin horizontal laminae of shale, mica flakes or lime and the size of sand grains usually varies at different elevations. In attempting to correlate cores of adjacent wells, it is found that but few if any of the laminae are continuous; there-

● *Rotary drill collars of Nickel-chromium steel manufactured by the Bridgeport Machine Company, Wichita, Kan. Sizes vary from 4⅝" to 9" O.D., length up to 30 ft., weight up to 3200 lbs.*

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In such severe service, high hardness, toughness and strength are obviously essential. Hence, Nickel-chromium steel (S.A.E. 3140) is used for the drill collars illustrated. Forged in two operations, these tools are heat-treated in special furnaces to develop uniform properties and structure throughout their entire length. Each is then quenched in oil horizontally in one operation. The resulting tensile strength is 125,000/148,000 p.s.i. yield point 75,000/105,000, and hardness 275 to 310 Brinell — plus good ductility and toughness. "The strongest, toughest and hardest drill collars made," is the description applied by the manufacturer.

Consultation on the use of Nickel alloy steels is invited.

THE INTERNATIONAL NICKEL COMPANY, INC., 67 WALL ST., NEW YORK, N.Y.

fore the sand may be composed of interconnected lenses of different permeabilities.

In repressuring sands of varying permeabilities in some cases it is found that by closing the producing wells for a time, more compressed air or gas will be forced into the partially filled voids or interstices of the less permeable lenses or strata from the adjacent strata of higher permeability as pressure builds up in the latter. After the pressure has practically reached a state of equilibrium by again opening the producing wells and allowing some of the compressed gas or air to flow into these wells from the more permeable strata, much oil will be forced out of the less permeable sand into that of greater permeability by the expansion of gas or air and carried along by it into the producing wells. Thus demonstrating that by intermittently opening and closing producing wells at proper time intervals, oil from tight portions of non-uniform sands may be recovered more readily. With a non-compressible fluid, as water; no benefits can be obtained by intermitting pressures since a drop in pressure will not draw a liquid from tight into more permeable sands.

Often when sands are found to be low in permeability they may be high in capillary attraction. Capillary attraction being much greater for water than for oil, a very fine-grained, homogeneous sand comparatively free from cementing material, may readily take up water and release oil. Such sands may be subjected very satisfactorily to water flooding, while coarse, highly permeable sands, interspersed with tighter strata would permit the water to channel through the more permeable strata and much oil would be by-passed and trapped in the tighter sand and forever lost.

While it is true that in many pools of fairly permeable sands water flooding has been profitable, yet ultimate production by repressuring with gas might have equaled or exceeded the yield obtained by flooding. Since the development and operating costs are so much less in repressuring, the net returns obtained might thereby have been greater.

Many failures have resulted in both water flooding and in repressuring, but neither method should be condemned for that reason since, in such cases, the sands might have responded satisfactorily if the pool had been correctly developed and properly operated. In other words, had proper investigation been made by a study of well logs, initial and past production records, and had well cores been taken and analyzed and had all factors entering into the problem been considered and a system been installed to fit conditions, success might have resulted instead of failure.

In the shallow area of the northern Mid-Continent there are many depleted or partially depleted pools where known secondary recovery methods, if applied, would not be profitable. However, there are a few other pools which if properly developed and operated would quickly repay development and operating costs and result in profits of several hundred percent.

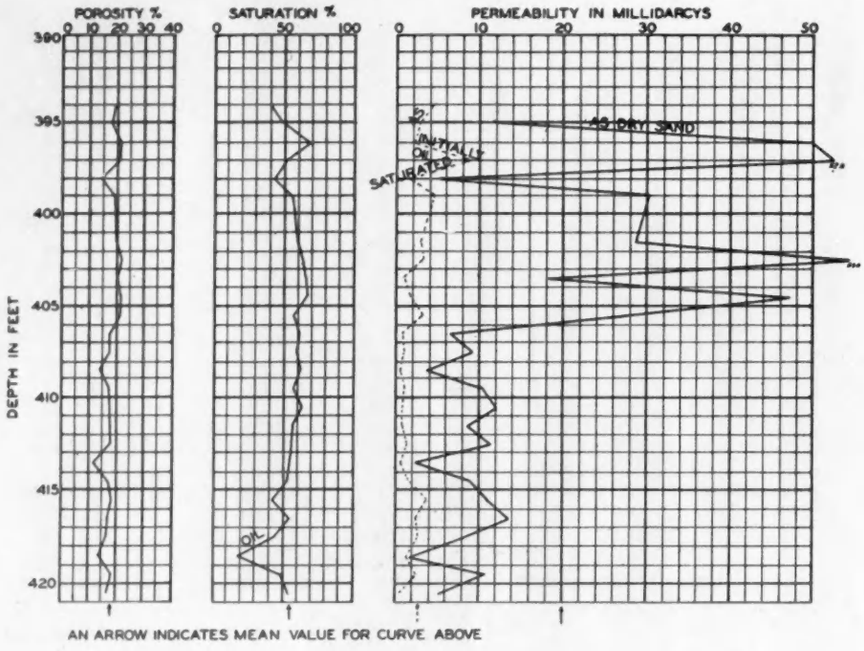
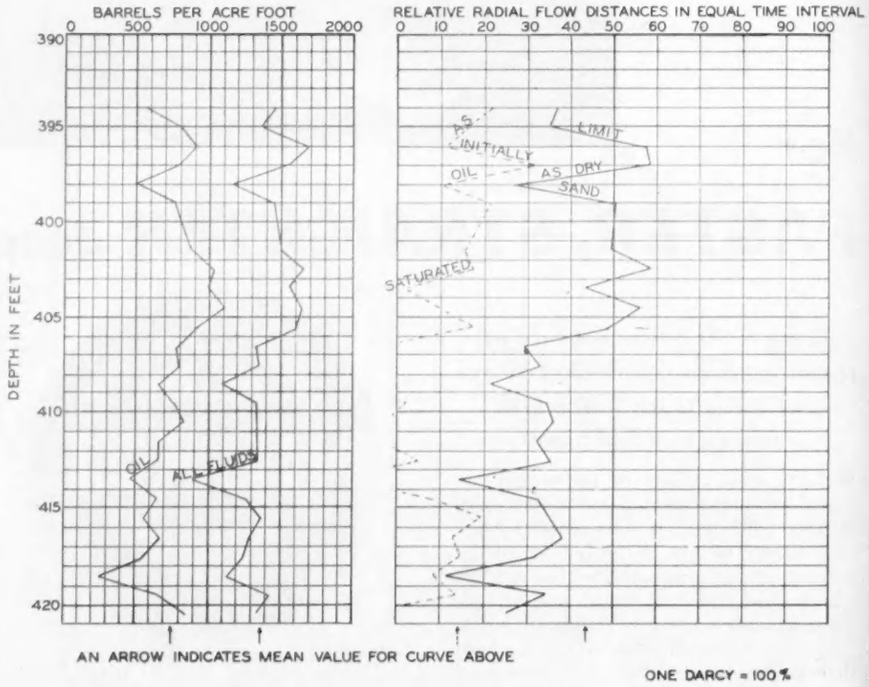


FIGURE 3
Well core analysis of the Wayside sand.



Proper spacing, within reasonable limits, of both input and producing wells is essential for success and after the repressuring or water flooding systems are installed it is also essential that the proper volume and pressure be ap-

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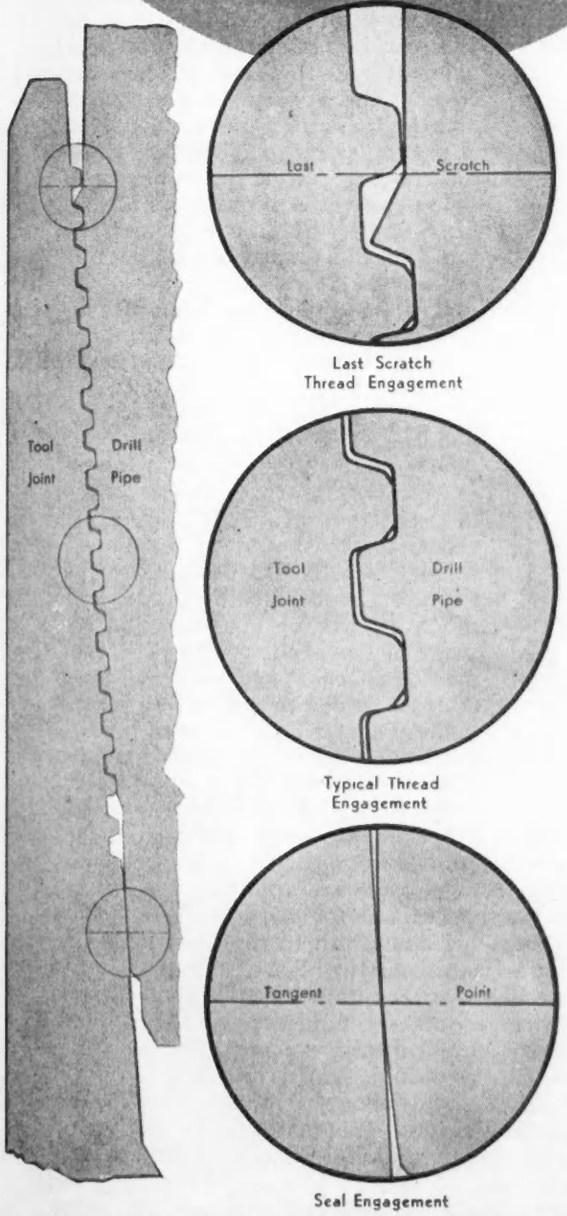


ENLARGED SECTIONS SHOWING ENGAGEMENT DETAILS

NATIONAL

THE NATIONAL SUPPLY COMPANY

EXECUTIVE OFFICES: PITTSBURGH, PA.
DIVISION OFFICES: FT. WORTH, TEXAS; TULSA, OKLA.; TORRANCE, CALIF.
GENERAL SALES OFFICE: TOLEDO, OHIO

plied to each input well. Where water flooding is to be done, the quality of the water must be made right by treating and filtering before pumping into the sand. Volumes of fluid injected into intake wells are regulated by the pressures applied. Seldom, if ever, do two wells take the same amount of fluid under equal pressures. Therefore very careful regulation of pressures is necessary if satisfactory results are to be obtained. For the determination of proper volumes, recording meters should be used at each input well and the output of injected fluid from each producing well should be carefully determined and regulated, if necessary, at short intervals of time to prevent by-passing and channeling of the sand. Well spacing is governed by the sand's permeability, the well depths, property lines, by interferences of buildings or other obstacles and the inclusion of existing producing wells, if they are in a condition to be used.

For intake wells, seldom can old oil wells be used since they have been shot, breaking down the well's wall and enlarging the space at the more permeable streaks, thereby causing such strata to take an excess volume of repressuring fluid, also fluid might escape around packer into "thief" sands above through crevices produced by explosives in the cap rock.

No pressure wells were shot on the most successful repressuring projects known to the writer. If any pressure wells are shot at all, the shot should be so light that it will not break down any of the sand and the explosives should be placed opposite the less permeable portion or parts only of the sand, as shown by a core analysis.

After repressuring or water flooding is started, the operation should be carefully supervised so as to maintain proper pressures on each well. As previously stated, each well will require a different pressure and these pressures are critical and will need to be varied from time to time as the development progresses. If too much pressure is applied in the injection of air, gas or water, channeling and by-passing will surely occur, injure the sand and trap much oil. If the pressure is too low, the oil recovery rate will be too small.

Data Necessary

In the investigation of a depleted or partially depleted oil pool with a view of redeveloping and reclaiming the recoverable oil, there are many factors to be taken into consideration and much data to be compiled and studied, which would enter into the determination of the project's success or failure.

The real problem is to determine the capital required, how soon it will be returned and what profit will be paid from the investment. In attempting to solve the problem, one should be assured of pipe line connections and a market which, of course, would be governed largely by the quantity and quality of the oil and the present supply and demand.

In the study of the pool itself, one should study its history and ascertain when and how it was developed and its initial and past production, including offset wells of neighbors. Secure an accurate map showing the location of wells drilled, including offset wells, the boundary lines of each tract on which separate royalty is to be paid, all streams and other bodies of water, if any, on the property, all public highways and other rights of way, all improvements and other objects which might hinder the proper spacing of new wells or of operating them.

From available well logs, it should be noted if possible the depth to and the thickness of the producing formation, the initial well production and the kind of formations through which the drill passes, the depth to and thickness of all water-bearing formations, the volume and quality of water. Note if any lies in contact with and underneath the oil, if not, the depth to the first water bearing formation below the oil. If gas or "thief" sands lie on top of the oil, if so, is there a definite impervious strata separating such sand from the oil, the character of the cap rock, the quantity and kind of explosives used in shooting the old oil wells and how abandoned wells were plugged.

Other data to be considered are available gas for fuel and make-up gas for repressuring, the quality and volume of water available for engine and compressor jacket cooling, for inter and after cooling compressed air or gas, and for water flooding. Additional factors to be noted are the accessibility of the field, roads and highways between the tracts and jobbing houses and machine shops, the roughness of surface over which development and operations are to be carried on if lands are cultivated, open pastures or covered with timber, the probability of stream overflow interference and sites for reservoirs, salt water ponds or other methods for salt water disposal.

Tests

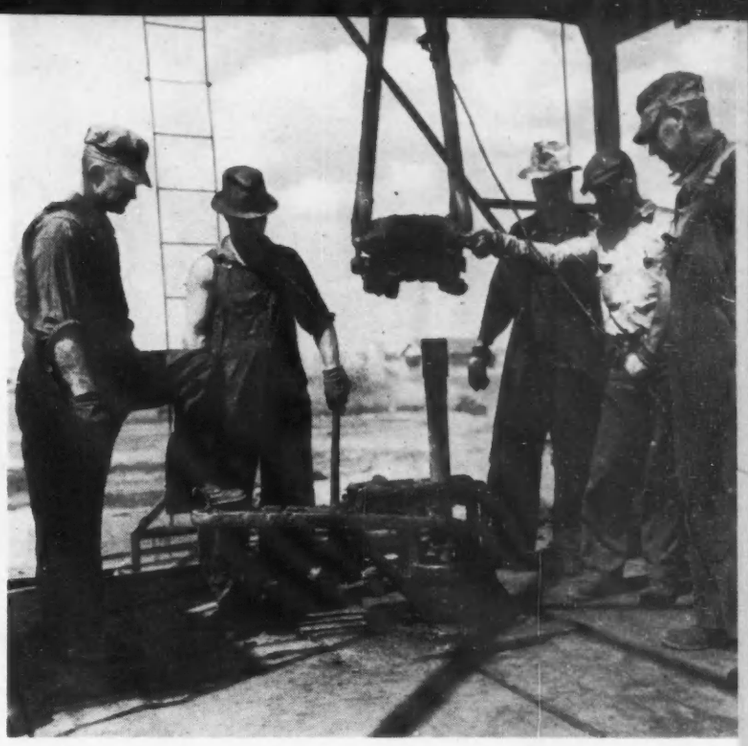
If the available data merits further investigation, then one or more wells should be drilled, cores taken of the oil sand and analyzed in a modern laboratory to ascertain the volume of oil remaining to the acre and to determine the sands permeability, porosity and percentage of saturation for both oil and water. Oil from the well should be analyzed for viscosity and for gravity. If such analyses show that either permeability, porosity or oil saturation is too low or that the oil's viscosity is too high, or its gravity too low, then further plans for the reclamation of the pool by flooding or repressuring should be abandoned. If the data as compiled and considered is found satisfactory, then detail plans should be made for the pool's rehabilitation.

From the core and the oil analyses can be estimated the recoverable oil and the rate of such recovery, the volume of air or gas and the pressure required to supply each intake well per day. Likewise for flooding can be determined the volume of water required to fill the sand voids, the rate of water input and the pressure required for each well.

If the sand is not permeable enough to permit fluids to flow through then no matter how much oil is in the sand, it cannot be recovered by repressuring or by flooding. The permeability should be adequate and fairly uniform and essentially uniform for water flooding. If sands are very permeable, repressuring should be employed for best results, since water, except in tight sands, will by-pass and much oil will be pocketed and remain in the sand. When very permeable streaks are present, they must be sealed or packed off, especially if water flooding is to be employed, or the project is doomed to failure. Likewise, gas or "thief" sands on top of the oil or gas strata through the oil sands must be packed or sealed off before pressure fluids are applied.

For either repressuring or flooding the depth to the sand must be sufficient to insure enough weight of the overburden to withstand the necessary fluid pressure to be applied, for if the mean pressure of the fluid forced into the sand is great enough to lift the overburden, channeling will surely result and the sand may be ruined.

Adjusting Guide Head. The patented Guide Head of the Guiberson Spider guides the tubing to the exact center of the hole, insuring accurate seating of slips



Removing Elevator. Tubing is safe in this spider's grip. The men are: T. W. Wade, John Spence, Jack Sims, Clyde Smith (Toolpusher), and E. I. Caruthers

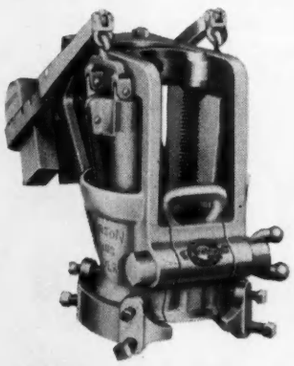
"THAT GUIDE HEAD IS A WONDERFUL IMPROVEMENT", SAYS CLYDE SMITH

CLYDE SMITH, fourth from left, second picture, in the employ of a major oil company, at Edmond, Oklahoma, tells us that the patented "Guide Head" on the Guiberson Tubing Spider is a wonderful improvement in spider design. This exclusive patented device is so adjusted that it holds the tubing in exact center of the spider's bore, at all times, whether running or pulling — causing the spider slips to seat instantly and accurately around the tubing without handling or forcing by the men. The men's hands need not be placed near the slips.

"We don't drop tubing with this spider," Smith added, "and it's the only spider we ever used that won't slip in paraffin."

This new-day spider offers other outstanding and exclusive advantages, which render it as nearly automatic as a spider can be. The lever seats or retracts the slips at one motion of the hand or foot of the operator. It can be used with or without the adjustable weight. A safety latch holds the lever in raised position and the slips in bowl, preventing slips from being thrown from the bowl should the tubing rebound. Large opening through spider body passes tubing catcher, packer or other tools. It is quickly installed or removed by simply removing bolt and gate.

Made in two sizes. See it at your supply store. The Guiberson Corporation, Box 1106, Dallas, Texas.



Guiberson "Heavy Type" Tubing Spider

Making Up. No back-up wrench is needed. Spider's grip is plenty powerful

Running In. (below) Slips retracted by lever. Men stand at safe distance

Use of Ferrous Phosphate in Applying Hard-Metal Coatings

By MICHAEL J. LEAHY

WITH the advent of rotary drilling bits having rows of cutting teeth, means had to be devised for applying hard-metal coatings to the cutting edges of individual teeth. Several advancements have been made during the years, and recent laboratory experiments have developed another method.

One early method comprised mixing granular tungsten carbide with sodium silicate, and applying it to the surface of the tooth, then "sweating" in this mixture with an oxy-acetylene torch. This method had some very serious disadvantages in that as the sodium silicate fused, it formed blowholes and blisters which may not be possible to remove, and therefore created a tendency for hard-metal coatings to chip from the teeth. Also, the steel of the teeth would of necessity have to be heated to its melting point in order to sweat—or alloy—the hard metal into the tooth surfaces. This excessive heating of the steel caused scale formation. The flakes of such scale may mix with the hard metal deposit as it is being applied; thereby causing the formation of pinholes in the hard-metal coating, which would weaken the strength of the deposit and might cause the coating to crack, flake or peel.

The first mentioned difficulty was overcome to a considerable extent by preheating the entire bit element to a dull red heat, and then applying the hard metal coating. This prevented blistering, but required the application of much more carbide to the teeth than was needed for the formation of good hard-metal coating. In efforts to overcome scale formation, use has been made of the atomic hydrogen torch with rather good results, and some research is being conducted on this phase of the problem. Another method, called the "tube electrode" method of applying hard metal, also is being used. In this, a tubular welding electrode of suitable steel analysis is pressed full of powdered hard metal. This electrode is then used in ordinary arc-welding equipment, and the hard metal is thus fused onto the surface of the teeth.

Paralleling the development of the "tube electrode" method, the use of "tube" welding rods for the acetylene welding of hard-metal coatings to steel was developed. In this method, oxidation is eliminated and the proportion of fused steel in the finished coating may be lowered to the proper amount.

In attempting to solve the problem, some manufacturers of welding equipment have turned to the production of composite hard-metal welding rods for use in the oxy-acetylene method of applying hard-metal coatings. With this type of rod, the ratio of hard metal to the binder in the finished coating may be pre-determined and quite accurately controlled. However, the formation of pinholes is possible here as it is in the other described methods of application.

About two years ago the author was called upon to serve as a technical witness in a patent suit dealing with rotary rock bits. While the question of applying hard-metal coatings was not directly involved in the suit, the author thus became interested in this problem and made a study of the technical and patent literature available on the subject. There is but little information available on the various methods of applying hard-metal coatings to steel.

Since it seemed impossible to obtain the desired technical data from available literature, a series of experiments to determine the advantages and disadvantages of the various known methods of applying hard-metal coatings was made. This led to the conclusion that the simplest and most economical method was that of "sweating" on pure tungsten carbide with a torch; provided a suitable binder and scale inhibitor could be found. Therefore a search was made for a paste that would not only serve as a binder but also as a scale inhibitor. Since scale is simply one form of iron oxide, a review of the subject of rust formation and the chemical reactions of the various iron oxides was made. From the data so obtained

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2. There is a 25% larger opening ***entirely*** through the shoe than can be secured in any other equipment.

3. There is 8″ of concrete over the valve seat (as in ***all*** Larkin Float Shoes), more concrete than is provided in any other equipment. This insures more than ample strength for the back pressure valve.

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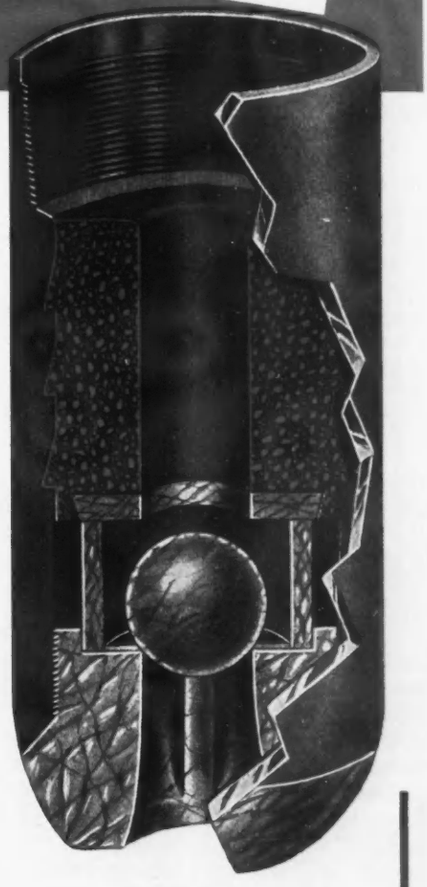

Fig. 428

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such compounds as seemed to show promise were chosen and and tried. A number of compounds were found which theoretically met the requirements of being a thick syrup or paste, which would not form blisters as the fusion temperature of the steel was reached, and which would prevent the formation of scale on either the steel or the carbide. Of all the compounds so chosen and tested, however, a paste formed of ferrous phosphate and a metal oxide was the one that proved to be the best by actual tests. Apparently the ferrous phosphate at high heat forms a coating of iron phosphide on the steel that prevents the formation of scale. Ferrous phosphate is a thick syrup at atmospheric temperature, and does not become free-flowing at the temperature of fusion. In fact it seems to form an amorphous solid at this temperature, and this serves as an excellent binder for the tungsten carbide crystals. The addition of the metal oxide to the ferrous phosphate was for the purpose of removing occluded hydrogen from the surface of the steel. This metal oxide is at least partially reduced to the metal at the fusion temperature, and hence, if the oxide is one of those of a metal which has a high degree of hardness, the entire hard-metal coating is thus made harder and therefore more resistant to abrasion.

It was soon learned that it was impossible to purchase commercial quantities of ferrous phosphate of the proper consistency, and hence means had to be devised for making it as needed. The method finally developed for making this compound is rather involved chemically, and therefore will not be described in detail here. It is sufficient to state that the main factor in the successful production of ferrous phosphate is the accurate control of the pH value at all times. The method developed for using the finished paste is very simple. It comprises the spreading of a thin film of the paste on the surface of the steel to be coated, as for example the leading sides of two or more adjacent teeth of a rotary bit cutting element, and then sprinkling onto this film the desired amount of tungsten carbide crystals of proper size. The welding flame used is so adjusted that it is "soft," and the torch is so held that the flame strikes the film at an angle in order to prevent "cupping" of the film. Heating is continued at a steady rate until the surface of the steel is sufficiently fluid to permit the carbide crystals to sink beneath the surface of the pool so formed. The finished coating should have a smooth, glossy appearance. As soon as the coating has been completed on one tooth, work should be started on an adjacent one in order to prevent undue warping of the teeth due to repeated heating and cooling. The paste may be applied to a red-hot surface and still be effective. However, when so applied, the tungsten carbide must be sprinkled on the film before the paste solidifies from heating. Furthermore, hard-metal coatings form a more perfect bond with soft steel than on hardened and processed steel; hence they should never be applied to case-hardened steel. One precaution that should always be observed is to see that there is plenty of ventilation in the vicinity of the welding operations, and that a blast of fresh air directed on the face of the welder. If this is not done, the fumes produced are apt to give the welder a headache and sometimes may even cause vomiting. It has not as yet been determined what is the cause of this effect on the welder.

Incidentally, it has been found that this paste forms a relatively non-rusting surface on the steel to which it is applied, even though the steel is not heated.

During the development of the above-described process, the author was called upon to develop a scale inhibitor, which could be applied to the surfaces of steel shafts, etc., which are subjected to abrasion in use. An investigation disclosed that there is a rapidly-increasing demand for hard-metal coatings on rotary-mud pump shafts and for other steel parts which come into contact with abrasive fluids at high pressures. In applying hard-metal coatings to such parts it is vitally important that no scale whatever be formed on such surfaces; or else the finished coating will have tiny pinholes therein and these pinholes will cause peeling or chipping of the coating while in service.

Application to Shafts

The method for applying such coatings to steel shafts comprises turning that section of the shaft to which the coating is to be applied down to approximately ¼-inch undersize. The shaft is then chucked in a lathe and is held by one or more steady-rests against excessive warping. A thin film of ferrous phosphate mixture is then applied—preferably with a pad of asbestos—to the surface of the steel. The welding of the hard-metal on the shaft must be continuous in order to prevent excessive warping of the shaft by repeated heating and cooling. A strong welding flame should be used and a section of the shaft about two inches long should be heated with this flame while the shaft is being rotated in the lathe at low speed. The hard metal should then be applied circumferentially. The actual technique of application will depend on the individual welder; as each has his own method of applying any type of weld metal. A continuous coating of hard metal that is sufficiently thick to assure that there will be no depressions nor undersize portions in the coating, after this section of the shaft has been ground to size, must be thus fused onto the shaft. After thus welding, the shaft is straightened while still in the lathe, if any warping has occurred. It is then removed and is placed in a suitable shaft-grinding machine, equipped with the proper grinding wheel. Careful inspection should be made to determine if there are any depressions in the coating. If there are, the shaft should again be chucked in the lathe and these depressions should be filled with additional hard metal. This part of the coating should then be ground to size. When filling such depressions with additional hard metal, no ferrous phosphate mixture should be applied; as this chemical reacts with the finished hard-metal coating at high temperature to produce a thin, hard case thereon. This case is very apt to check or crack when the shaft is cooled.

At the present time the author is extending his investigations of this subject to include the welding of very thin steel sheets such as automobile fenders or the like. It is well known that the formation of very minute quantities of scale on such thin sheets causes "burning" of the sheet when attempts are made to weld it. It has been found that if a thin film of the ferrous phosphate mixture is first applied to the edges of the sheet to be welded, no scale is formed during welding operations and hence burning of the sheet is prevented. However, further tests will have to be made to determine the hardness, and the strength, of the weld that is so applied.

WORLD DEVELOPMENT and TECHNOLOGY

Edited by
WM. V. GROSS, Associate Editor

Mexican Situation

Oil circles anticipate another note from Hull to Cardenas . . . Eastern States confirms purchase of Mexican oil . . . July production 2,000,000 barrels

MEXICAN oil circles are anticipating with considerable eagerness the next note United States Secretary of State Cordell Hull may dispatch to Mexico regarding indemnity for properties, oil and agrarian, expropriated from Americans.

Attempts to obtain settlement for those properties have been stalemated by Cardenas' flat refusal to allow an impartial board to decide whether Mexico has acted within the bounds of equity and by his naive counter proposal that one delegate from each nation get together and talk things over. The proposal from the southern republic is regarded in business circles as meaning exactly nothing, so far as approaching a definite understanding is concerned.

Meanwhile, a spokesman for Standard Oil Company of New Jersey, parent organization of Huasteca Petroleum Company (one of those expropriated by Cardenas), stated his company would take steps to attach any oil shipped to the United States which the company believed to have been produced from its expropriated properties in Mexico. This announcement came on the heels of news that Eastern States Petroleum Company had arranged for shipment of considerable non-expropriated Mexican crude to Houston. The latter organization issued a statement August 17 which said:

Purchase Confirmed

"The Eastern States Petroleum Company confirms it has purchased a substantial quantity of non-expropriated Mexican crude oil for refining in the Houston, Texas, refinery, the contract covering an extensive period. The company states that the product will be marketed both in the export and in the domestic markets. Terms and conditions of the contract have not been revealed. The first vessel to lift a cargo under this contract, namely the S. S. R. W. McIlvain, is arriving in Mexico Wednesday."

Drilling Authorized

Petroleos Mexicanos, the government's oil company, has authorized the drilling of a number of wells in various fields, with most of the work scheduled for Poza Rica field, where Mexican Eagle Oil Company formerly the largest producer in Mexico, had been very active up to the time of expropriation. It has also started operations at Chapacao, Vera Cruz, on property formerly operated by Mexican Petroleum Company of California, said to be a subsidiary of Standard Oil Company of New Jersey. This company was not mentioned in the expropriation decree, but its properties were taken over along with those which were mentioned.

According to responsible private sources, including some in labor circles, Mexico's July production is estimated at 2,000,000 barrels, though the government continues mute when asked for production figures. This estimate is based upon information that Poza Rica, which set up a daily average recovery of 60,000 barrels late in June, is virtually the only field producing, the production of other fields being held down to just enough to keep from killing the wells. It is explained that the government finds distribution from Poza Rica easier than pro rata distribution from all fields. Mexico's production in June is figured roughly at 1,850,000 barrels.

Germany Wants More Oil

Efforts to build up export oil trade continue, but without a great deal of success. However, much importance was attached in Mexico City during the week to an indication that Germany wants more Mexican oil than she is getting. In this connection THE OIL WEEKLY received August 18 the following telegram:

"Demonstration that Germany wants more Mexican oil is the unexpected summoning home by Hitler of Baron Rudt von Collenberg, his minister to Mexico. The diplomat leaves as soon as possible for Berlin via New York. It is said at the German legation that von Collenberg will report personally to der fuehrer regarding the Mexican oil situation.

Social, economic and labor problems in Mexico continue far from satisfactory, with most of the Mexican economists and students dating the beginning of the poor state of affairs back to March 18, when Cardenas confiscated the $400,000,000 foreign controlled oil industry. The peso was quoted at 4.96 and 4.97 officially during the week, but on the street the merchants gave 5 for a U. S. dollar. Food necessities have gradually increased in price without an accompanying general increase in income for workers. Many instances cropped up during the week of where labor organizations were expressing disapproval of the manner in which things were being run by their leaders.

Vicente Lombardo Toledano, often referred to as the czar of the Oil Workers Union, has repeatedly been accused of being a disciple of Stalin of Russia. It may be significant, therefore, that last week brought the news that labor organizations in Mexico had petitioned the federal government to negotiate for resumption of diplomatic relations with Russia. These were severed in 1929.

Austrian production shows 55.1 percent increase

Austrian crude oil production in May totaled 4900 metric tons, a marked increase over the 3930 metric tons produced during the corresponding month a year ago, the American trade commissioner at Vienna reported to the United States department of commerce.

A gain of 55.1 percent, from 13,930 metric tons to 21,600 metric tons, was made in production during the first five months of this year over the same period of 1937.

Eleven wells were reported producing in the Zistersdorf territory, the latest having come in production June 9 with a daily output of 20 metric tons. Four wells were drilling in that area, one by a German company.

Venezuela shows sharp increase in production

Venezuela's crude oil production continues to increase since expropriation of the best oil producing properties in Mexico by the government of the latter nation. Production in Venezuela during June amounted to 16,131,000 barrels, an increase of 261,000 barrels over the 15,870,000 barrels produced in May.

The increase of Venezuela for the first six months of 1938 over the first

six months of 1937 amounts to 5,398,000 barrels, the figures for the two six-month periods being 87,941,000 barrels this year and 82,543,000 barrels the first half of 1937.

June field work accounted for 49 completions, leaving 42 strings of tools active in proven fields, to say nothing of those busy on wildcats. The completions were divided as follows: Gulf, 14; Venezuelan Oil Concessions, 14; Lago Petroleum Corporation, 8; Creole Petroleum Company, 11; Caribbean Petroleum Company, 2.

O'Shaughnessy's South American oil reports distributes the Venezuelan production thus far this year as follows: (figures in barrels)

	June		Six Months	
	1938	1937	1938	1937
Venezuelan Oil Concessions....	4,608,000	4,221,000	24,553,000	20,606,000
Lago Oil Corporation.....	4,508,000	5,146,000	25,259,000	27,462,000
Gulf Oil Corporation.....	2,194,000	2,094,000	11,430,000	8,850,000
Caribbean Petroleum Company..	1,226,000	1,251,000	6,115,000	6,658,000
Creole Petroleum Company.....	3,046,000	2,893,000	17,484,000	16,694,000
Colon Development Company...	436,000	378,000	2,388,000	1,900,000
British Controlled Oilfields.....	55,000	59,000	364,000	373,000
North Venezuelan Pet. Co.....	58,000	.....	348,000	.....
Total	16,131,000	16,042,000	87,941,000	82,543,000

Canadian Fields

Southwest outpost at Turner Valley looking good.

Spud in on 41,000-acre Bearberry structure block.

New Valley structure wildcat is running casing.

TWO wells were completed and a new test started in the Turner Valley field of Alberta, Canada, last week, but lack of major developments in the Dominion's principal field directed interest to wildcat structures of Alberta, Saskatchewan and British Columbia.

Royalite Oil Company, Limited, had both Turner Valley completions: Its 31, farthest west producer on the southwest flank, Legal Subdivision 6, Section 29, Township 18, 2-w5, stopped drilling at 8064 feet, 474 feet in the Madison lime. It started at 350 barrels a day and at the week-end was on production test following a small treatment of acid. No. 32, first test south of the Highwood River to reach the Madison, Legal Subdivision 8, Section 17, Township 18, 2-w5, finished drilling late in the week at 7308 feet, of which 508 feet was limestone. It was being cleared of rotary fluid.

Outpost Looks Good

Okalta Oils Limited's No. 6, Legal Subdivision 3, Section 30, Township 18, 2-w5, farthest west test on the southwest flank and deepest hole in the British Empire, made 250 feet of new hole last week to 9700 feet, total depth. It is described as logging satisfactorily and the Madison is expected in another 100 feet. The test is 2 miles west of present production.

On the Bearberry structure, west of Olds, Petroleum Structures, Limited's No. 1 was spudded in last week. The company has acquired leases on 41,000 acres on the structure, which in many respects is similar to that of Turner Valley. It is being financed jointly by the Anglo-Canadian Oil Company, Limited, Calgary Gas Company, C. & E. Corporation, Limited, and Vancouver interests headed by Neil McQueen. Two wells were drilled on this structure in 1914, one carried to 3600 feet and the other to 4500 feet. Both reported showings of gas heavily saturated with naphtha, but were not completed as commercial wells. The structure has been thoroughly surveyed by geologists of the Calgary Gas Company during the past few months. The new well, which is being drilled by Drilling Contractors, Limited, expects the Madison at about 8000 feet.

Rigging Up on Watson

Mar Jon Oil Company, Limited, was hauling rotary equipment to No. 3 which had been drilled to 5520 feet, in the Blairmore formation, with cable tools. The well is on the Watson structure, and its location is Legal Subdivision 3, Section 4, Township 10, 2-w5, 17 miles north of Lundbreck. Eight-inch casing has been run to 5150 feet. This test started in the Benton, and had encountered sufficient gas to fire the boiler for the cable tool outfit. The gas will be used for one of the boilers of the rotary, which will be operated under three tours. The company has leases on 14,000 acres on the structure.

On the Highwood-Sinclair structure, Green Valley Petroleums, Limited's Banner 1, Legal Subdivision 6, Section 34, Township 17, 3-w5, made 55 feet of new hole last week and was still drilling in a hard formation believed to be the cap above the principal porous section of the Madison lime. Bottom was at 6202 feet, of which 842 feet was Madison. This wildcat encountered encouraging oil shows higher in the Madison and is being closely watched as a possible new pool opener.

Border Petroleums, Limited's No. 1, Legal Subdivision 5, Section 32, Township 18, 17-w5, on the Taber structure, drilled through a 300-foot plug and was making new hole last week. The well had been drilled by Calgary Gas Company to 2504 feet and had been standing idle since 1923. It will be carried to the lime, expected in another 800 feet.

Wildcat to Set Casing

New Valley Oil Company, Limited's wildcat on the New Valley structure, which had considerable crude standing in the hole when it was re-opened last spring following a winter shut-down, had casing run last week to 8200 feet. The 5¾-inch was to be set and drilling resumed. The structure is northeast of Turner Valley, the wildcat being approximately 3 miles northeast of Royalite Oil Company, Limited's 29, most northerly producer in Turner Valley.

Imperial Oil Company, Limited's Lethbridge south wildcat, 50 miles south of Lethbridge, was being placed on test following treatment with 1000 gallons of acid. Bottom was at 4055 feet. Whether the well can be commercially produced was doubtful when the treatment was given, as considerable water was encountered.

Canyon Oils, Limited, and the Canadian Western Natural Gas, Light, Heat & Power Company will immediately start a wildcat test on the Clearwater structure, 60 miles west of Ennisfail and 22 miles south of Mountain House. Erosion has exposed the Banff shales, which lie between the Madison and Devonian limestones, and it is believed production may be reached at about 2500 feet, compared to between 7000 and 8000 feet in Turner Valley. The structure is 100 miles north of Turner Valley.

In Saskatchewan, Vera Oilfields, Limited's No. 2, in the Unity area, penetrated a 10-foot oil sand of sufficient saturation to warrant a provincial government test. Bottom is at 2010 feet. The test was started by Vera Oilfields, and is being completed by Franco Oils, Limited, for an acreage consideration.

Columbia Oils, Limited's wildcat on the Sage Creek structure of British Columbia, abandoned temporarily after drilling to 8000 feet last year, is to be re-opened for additional testing. The wildcat is in southeastern British Columbia, 6 miles west of the Alberta boundary

In the Dover field of Ontario, Prairie Gas & Oil Company, Limited's No. 6, on Lot 5, Front Concession, Dover Township, was completed at 3214 feet as a large gas well. A gauge was not immediately taken. Production will be taken by the Dominion Natural Gas Company.

English wildcat shot to increase production

Results of a nitro shot in Anglo-American Oil Company's Midlothian 1, first English wildcat of the current exploratory campaign to shown signs of commercial production, are waited with considerable interest. Previously the well had produced 3½ barrels per hour for six hours when completed at about 1750 feet. Midlothian 1 is at Cousland, near Dalkeith.

Ten wildcats are active in England. Nine of them are drilling, the deepest being reported in the Oxford series slightly below 3100 feet late in July. D'Arcy Exploration Company lists seven of the projects, Anglo-American Oil Company, 1; Steel Brothers, 1; and Gulf Exploration Company, 1.

MEN IN THE INDUSTRY'S NEWS

BLAINE JOHNSTON NAMED MANAGER OF PRODUCTION AND PIPE LINE DEPARTMENTS FOR CROWN CENTRAL PETROLEUM

IN 35 YEARS JOHNSTON HAS HAD A WIDE EXPERIENCE IN THE OIL INDUSTRY

CROWN CENTRAL PETROLEUM CORPORATION of Houston, Texas, has named Blaine Johnston manager of its production and pipe line departments.

Johnston has had wide experience since starting his oil career as a toolpusher in 1903 at Spindletop. He has held jobs as rotary driller, cable driller, roughneck, roustabout, gang pusher, teamster, production and drilling superintendent, and vice president of oil companies, besides engaging in the business as an independent. He has worked in every oil state in the United States except California.

Since 1903 he has been employed by several different companies; for seven years he was general superintendent for White Oil Corporation and later Crown Central Petroleum Corporation. From 1930 until 1935 he was vice president of Simms Oil Company in charge of both drilling and production. In 1935 he became vice president of T-J Drilling Company. Following this, he acted as general manager of Johnston Oil Field Service Corporation, resigning this position to join the organization of Crown Central Petroleum Corporation at this time.

Johnston has been active in the American Petroleum Institute, serving as chairman of the Southwest District for one year, and was a member of the general committee of the Division of Production for some time. He is responsible for a number of patents of oil field equipment which are in use today.

BLANK & STOLLER

BLAINE JOHNSTON

GEORGE J. GREER, Dallas producer, spent the past week in New York and Chicago on a business mission, then launched a vacation to be taken at Colorado Springs, Colorado.

JAY E. CRANE has been elected treasurer of Standard Oil Company of New Jersey succeeding R. P. Resor, who retires after half a century of service. Prior to joining the Jersey company on May 1, 1935 as assistant treasurer, Crane had spent 20 years with the Federal Reserve Bank of New York. He served as an unofficial observer at the conference which established the Bank for International Settlements and was in London at the time of the World Economic Conference when efforts were made to stabilize the principal foreign exchanges. Much of the work which he supervised at the bank was undertaken for the Treasury Department at Washington, such as operations in gold, silver and foreign exchanges. Since his affiliation with Standard Oil Company of New Jersey Crane has visited all the principal operations of the company in Europe and South America.

JOHN H. REEVE has been appointed oil and gas supervisor for the Mid-Continent district of the United States Geological Survey and will report to his new headquarters at Tulsa the latter part of August. He has been a deputy supervisor in the northwestern district for the past eight years with headquarters at Casper, Wyoming. Foster Morrell, who has been acting supervisor of the Mid-Continent district since the death of John M. Alden a year ago, will remain in the Tulsa office as deputy supervisor.

THOMAS L. COLEMAN, district engineer in the oil and gas leasing division of the United States Geological Survey, has been transferred to Ardmore, Oklahoma, from Wichita Falls, Texas. The new headquarters will be in the Gilbert building, Ardmore.

DR. R. B. NEWCOMBE, head of the geological and lands division of Associated Petroleum Company of Detroit, has announced his resignation, effective September 1, to enter the independent consulting field. Until three years ago he was first assistant state geologist in Michigan. His writings as assistant state geologist comprise an important part of the library on Michigan oil and gas development. He served as the first president of the Michigan Geological Society, now in its second year.

BERT RIDGEWAY, in charge of the Michigan division of Cities Service Oil Company, has been transferred to Mattoon, Illinois, to open a new office. Ridgeway came to Mt. Pleasant from Kansas two years ago. William Schulz, from Texas, will take charge of the Michigan division.

DR. F. M. ROGERS, chief chemist of Standard Oil Company of Indiana refinery at Whiting, Indiana, has been awarded a gold pin by the company in recognition of 30 years of faithful service. After joining Standard in 1908, he rose to become chief chemist at Whiting in 1914.

H. G. HARDING, secretary and treasurer of Mar-Jon Oil Company, Ltd., Vancouver, British Columbia, was in Calgary, Alberta, last week making arrangements for drilling the company's wildcat on the Watson structure to completion with rotary tools.

KENNETH L. GOW, geologist for Superior Oil Company, discussed the "Geological Exploration in Oil" before members of the Mattoon, Illinois, Rotary Club last week.

BOB HUME, drilling superintendent for Wood-Callahan Oil Company, the most seriously burned in a recent explosion on one of the company's completed wells in the Edison field, southeast of Bakersfield, has been dismissed from the hospital.

JOHN W. EMCH, West Texas operator, departed early last week by plane for New Martinsville, West Virginia, upon learning of the illness of his mother, who died shortly after his arrival at the family home. Emch has resided at San Angelo for a number of years and has been active in wildcat operations.

ROBERT S. ELLISON, president of Stanolind Crude Oil Purchasing Company and Stanolind Pipe Line Company, arrived in Casper, Wyoming, last week from Tulsa. He planned to make a side trip to Montana late in the week, returning to Casper for a brief stay.

JOHN F. MABEE, Oklahoma operator and drilling contractor, and Ed Holman and Cy Herndon, Texas drilling contractors, came into the Illinois basin area last week to drill for The Texas Company in the Dix and Lake Centralia fields.

S. D. PIERCY, Quaker State Oil Refining Company, Sterling Oil Division, was reelected president of the Pleasants County Division of the West Virginia Petroleum Association. Other officers are G. A. Smith, first vice president; H. J. Gregg, second vice president, and T. A. Anderson, secretary. Committee heads named are: Legislative—W. P. Kerwood, chairman, and G. C. Mitchell, vice chairman; Public Relations—George A. Clovns,

chairman, and Leonard Hart, vice chairman; Local Affairs—Lew Brafford, chairman, and Julian Stanley, vice chairman.

SIR EDWARD ELLINGTON, Air Marshal of Great Britain, met with R. A. Brown, Sr., and W. S. Campbell, representing Alberta Petroleum Association, in Calgary last week and, following a tour of the Turner Valley field, declared that "in the event of war, should there be difficulty in getting oil from foreign countries, Turner Valley production would be of great importance."

C. T. BROWN, Calgary, of Canyon Oil Company, was in Toronto, Ontario, last week.

DR. J. O. G. SANDERSON, geologist for Home Oil Company, returned to Calgary last week following a visit to the company's wildcat venture on the Brazeau structure of Alberta.

W. W. KEELER, Tulsa, geologist for Skelly Oil Company, was in Mattoon, Illinois, last week and took space in the Osborne Building from which the company's Basin area activities will be directed.

J. ALLEN GREESON, Little Rock, and M. W. Greeson and C. D. McSwaim, both of Prescott, last week organized the Arkansas Valley Gas Company as an Arkansas corporation.

VIGGO LAURSEN, president, heads officers of York Oils, Ltd., producing company active in Alberta, Canada, when shareholders held their annual meeting in Vancouver, British Columbia, last week. Other officers are H. K. Reed, vice president; G. R. H. Anderson, manager and secretary; Dennis K. Yorath, assistant secretary, and Homer C. Adams and R. M. Spence, directors.

W. A. GOFORTH, president, and Harold Gilbert, vice president of Valley-Osage Oil Company, Tulsa, arrived in Mattoon last week from which point they will conduct a study of the Illinois basin area.

GEORGE W. HOLLAND, director of the Petroleum Conservation Division of the United States Department of Interior, Washington, spent the fore part of the past week in the East Texas field.

C. F. SULLIVANT, administrative chief of the Texas Railroad Commission and head of hot-oil investigations in the East Texas field, has been transferred to Wichita Falls for duty in the K-M-A field.

DONALD C. BARTON, Houston, president of the American Association of Petroleum Geologists, addressed a special meeting of the Appalachian Geological Society last week in Charleston, West Virginia. He discussed the Mexican expropriation edict and its effects on the industry in this country, illustrating his talk with motion pictures. R. C. Lafferty, president, presided, and Dr. Paul H. Price, Morgantown, West Virginia state geologist, was a guest.

E. R. BROCKWAY, Tulsa, is in Mattoon arranging for an Illinois office for Devonian Oil Company.

FRANK LEACH, geologist for Shell Petroleum Corporation, is vacationing in Colorado.

Joins Texas A. & M.

HENRY E. GROSS

Who has been appointed associate professor of petroleum engineering at Texas A. & M. College. He received his B.S. degree from the Missouri School of Mines, his M.S. degree from the University of Illinois, and degree of engineer of mines from Missouri School of Mines. During the past two years he has been teaching at the University of Oklahoma.

IAN DAVIDSON, co-president of Compania Mexicana Petroleo "El Aguila," S. A., a former resident of London, recently was married in Mexico City to Miss Eugenia Bermejillo, daughter of the Marquesa de Mahernando.

DIED:

DAVID M. HAMMAT, 62, oil operator making his headquarters in Tulsa since 1905, died August 8 following a stroke of paralysis last spring. He had been associated with G. C. Probst, A. E. Ernsberger and James B. Morrison. Born in St. Marys, West Virginia, he had been in Oklahoma City for five years before coming to Tulsa.

JOHN M. McNALLY, 59, pipe line superintendent for Stanolind Pipe Line Company in Oklahoma and Kansas, died August 12 at his home in Tulsa of a heart ailment. He had been with the company for the past 20 years.

JOHN G. GOSSETT, former production scout for the Humble Pipe Line Company in the East Texas field and more recently engaged as a rig builder, died suddenly August 5 at Waco, Texas.

Kansas geologists to have twelfth field conference

Kansas Geological Society, with the cooperation of the Rocky Mountain Association of Petroleum Geologists, has completed plans for its twelfth annual field conference, to be held along the Front Range of the Rocky Mountains in Colorado, September 1 to 3, inclusive. The conference will convene at the Kit Carson Hotel, La Junta, Colorado, Wednesday evening, August 31, where participants will register and receive guide books.

The conference will be devoted to a study of all the sedimentary rocks exposed along the Front Range from their contact with the pre-Cambrian granites to the Oligocene beds. Large unconformities, lateral gradation of beds, and wedging out of formations are some of the features of the conference.

September 1, the morning trip will be devoted to observing the Cretaceous beds exposed on the Apishapa Uplift. After leaving Walsenburg a number of dikes in the Pierre shale, and the Dakota sandstone overlapping pre-Cambrian will be seen. In the afternoon the type locality of the Harding sandstone (Simpson) and other Ordovician beds will be seen. Also excellent exposures of the Fountain sandstone, Morrison and Cretaceous beds will be observed at Canon City.

September 2, during the morning the conference will visit Williams Canyon where excellent exposures of Manitou limestone and Sawatch sandstone will be seen. Buried pre-Cambrian highs beneath the Sawatch also will be observed when passing through the Narrows and later Glen Eyrie shales. During the afternoon the conference will continue northward along the Front Range viewing outcrops of the Fountain and Lyons sandstone.

September 3, the conference will continue northwest from Fort Collins. The Bellevue dome will be seen. Thinning of the Lyons sandstone to the north can be observed. A stop at Oil Canyon will be made to study the thickening of the fossiliferous Ingleside formation of the Upper Pennsylvanian and to collect fossils.

Gas Measurement Short Course for Eastern States

An Appalachian Gas Measurement Short Course will start August 22 at the West Virginia School of Mines, "to provide an opportunity for members of the industry who are interested in measurement and regulation of gas to obtain information on the proper operation and repair of equipment used for this purpose and to acquaint them with the newest developments in this field," announced Charles E. Lawall, director of the school.

G. R. Spindler, of the School of Mines faculty, will direct the course, which will extend through August 24. Cooperating organizations include the Natural Gas Department of the American Gas Association, West Virginia Oil & Natural Gas Association, and the West Virginia public service commission.

The school is intended to serve the entire Appalachian territory, including the New England states, New York, New Jersey, Delaware, District of Columbia, Pennsylvania, Ohio, Maryland, Kentucky, Tennessee, Virginia, North and South Carolina and West Virginia.

THE WEEK'S NEWS SUMMARIZED

Allowables

The Bureau of Mines in its regular forecast of demand for petroleum products foresees for September a level 7 percent below that of the same month of 1937. It estimates that 3,444,300 barrels will be consumed daily. The decline in estimated demand as compared with a year ago is due principally to larger estimates of gasoline stock withdrawals.

Satisfaction with the present situation in the industry and with proration in Texas was voiced at the regular Texas monthly hearing last Friday, which together with the lack of comment from members of the Railroad Commission leads to the belief that practically the same schedule will be continued in September as in force in August.

Governor Huxman of Kansas continues to cry about his state not being treated fairly in allotting United States crude production. His latest move is to try to require the use of only Kansas petroleum products on state construction jobs.

Capitols

Representatives of the oil and coal industries last week made their final plea for retention unchanged of the excise taxes on imported oil, picturing before the Committee for Reciprocity Information the possibilities of a return of the chaotic conditions of 1933 if the taxes are cut in the proposed reciprocal trade agreement with Venezuela.

Whether the plea will have any effect remains to be seen, but indications are that the importing interests, which were not represented at the committee hearings, will do their work through the Venezuelan government negotiators, who will hold out for a reduction in the taxes as a condition to the agreement.

In most instances in the past, protests of domestic interests against duty cuts have had little influence with the State Department.

Meanwhile, Assistant Attorney General Thurman Arnold declared Congress might be asked to enact a measure declaring gasoline a utility. He charged major companies had created a "toll bridge" between independent dealers and their markets by excessive filling station building, aggressive sales policies and nationwide advertising.

A sensitive Department of Justice last week issued a formal statement denying any tie-up between the placing of insurance with James Roosevelt, son of the president, by Harry F. Sinclair, and the subsequent dismissal of the Madison indictment against Sinclair Refining Company and Earl W. Sinclair, intimated in a recent Saturday Evening Post article.

Admitting that it seldom resorts to official denial of charges leveled against it, the department explained that the implication in the magazine article was "so utterly baseless" that it was unwilling to let it pass.

Markets

Despite some local over-supplies of crude and gasoline, continued effective curtailment of production and similar moderate runs to stills are tending to bolster the industry's markets. Although output of wells has been increasing of late, it still is nearly 10 percent lower than a year ago. Despite the gain in production, gasoline and crude oil stocks continue to be drawn up. However, gasoline stocks are still excessive, being 7½ percent greater than a year ago. Likewise, fuel oil storage is too high, being 33 percent larger than a year ago and showing no signs of slacking off. On the other hand, crude stocks are 6½ percent lower than the supply on hand at this time last year.

Prices last week remained mostly unchanged. There have been no changes in crude and gasoline prices, but kerosene and fuel oils were a little lower.

Pipe Line

A threat that producers in the Turner Valley field of Canada would likely construct a $15,000,000 pipe line to the Great Lakes unless railroad rates were reduced was made last week. This would make it possible to place Turner Valley crude on East Canadian markets at competitive prices with crude imported from the United States.

News Section Index

General News ..... 43 to 52

Allowable Picture	44	Pipe Line	52
Oil in Legal Circles	46	Market Situation	47
Oil at Capitols	45	Crude Production	50

World Developments 37

Field Development News ..... 63 to 82

Arkansas	68	Oklahoma	56
California	73	East Texas	62
Eastern States	70	Texas Gulf Coast	64
Illinois	71	North Texas	60
Kansas	58	Panhandle Texas	60
Louisiana Coast	65	Southwest Texas	63
North Louisiana	67	West Texas	61
Michigan	75	Rocky Mountains	74
New Mexico	59	Wildcat Drilling Report	76

Allowable Picture

Bureau estimates September demand as 7 percent below last year . . . Texas may adopt two-day shutdown each week following statewide hearing

Bureau expects 6200 barrel daily increase in September

Foreseeing that demand for domestic crude during the coming month will not come within seven percent of the demand for September, 1937, the Bureau of Mines on August 18 forecast a daily consumption of 3,444,300 barrels, an increase of only 6200 barrels above the August estimate and 65,000 barrels under the estimate for the corresponding month last year.

The decrease in estimated demand as compared with a year ago, it was explained, is due principally to larger estimates of gasoline stock withdrawals.

Discussing the current situation, the Bureau pointed out that daily average crude production and runs to stills during the four weeks of July averaged 3,334,000 and 3,200,000 barrels, respectively. During that period stocks of refinable and heavy crude declined 3,029,000 barrels, but foreign stocks increased 92,000 barrels, making the decline in domestic grades 3,121,000 barrels, or 111,000 barrels daily. The addition of this amount to production gives 3,445,000 barrels as the apparent daily average demand for domestic crude oil during the period, compared with 3,398,100 barrels estimated by the Bureau for July.

The estimate of domestic motor-fuel demand for September is 47,000,000 barrels, or one-half percent lower than the actual demand for the same month last year. Motor-fuel exports are estimated at 4,400,000 barrels, 100,000 barrels less than estimated for August and 56,000 barrels less than actual exports last September.

An analysis of the stock situation pointed out that supplies of finished and unfinished gasoline amounted to 80,531,000 barrels on June 30 and that statistics of the American Petroleum Institute show a decline of approximately 4,500,000 barrels during July, bringing them to approximately 76,000,000 barrels at the close of that month. "If the Bureau's estimate of 6,300,000 barrels as the August withdrawal materializes, there will be a little less than 70,000,000 barrels of gasoline on hand as of August 31, compared with about 67,000,000 barrels on the same date in 1937," the bureau commented. "For September the bureau estimates a further reduction of 3,700,000 barrels, compared with an actual withdrawal of about 1,400,000 barrels in September, 1937. Stocks of gas oil and distillate fuel oil on June 30 were 20 percent higher than last year, while residual fuel oil stocks were 18 percent higher, indicating the possibility of a substantial reduction in crude runs in the last quarter."

The bureau placed benzol and direct sales and losses of natural gasoline at 900,000 barrels, making the estimated refinery production of gasoline 48,800,000 barrels, which it distributed among the several districts as follows: East Coast, 6,290,000 barrels; Appalachian, 1,630,000 barrels; Indiana-Illinois, 8,250,000 barrels; Oklahoma, 2,710,000 barrels; Kansas, 2,550,000 barrels; Inland Texas, 3,890,000 barrels; Texas Gulf Coast, 11,750,000 barrels; Louisiana Gulf Coast, 1,440,000 barrels; North Louisiana-Arkansas, 940,000 barrels; Rocky Mountain, 1,170,000 barrels; California, 6,180,000 barrels.

Natural gasoline consumption at refineries during the coming month is figured at 8.5 percent of total gasoline production, or 3,980,000 barrels; the yield of straight run and cracked gasoline is estimated at 44.4 percent, compared with 44.2 percent for August and an actual of 43.5 percent last September, the application of which to the estimated straight-run and cracked gasoline production of 42,820,000 barrels gives refinery crude requirements as 96,430,000 barrels, or 3,213,000 barrels daily.

Foreign crude runs to stills are estimated at 2,400,000 barrels, 100,000 less than the August estimate, and the estimate for crude exports has been reduced 700,000 barrels from the August figure to 7,000,000 barrels, while the estimate for fuel and losses remains unchanged at 2,300,000 barrels. On the basis of these factors, the September demand for domestic crude is placed at 103,330,000 barrels, or 3,444,300 barrels daily, allocated among the states as follows:

Texas, 1,398,600 barrels against 1,377,800 barrels for August; California, 638,300 barrels against 649,300 barrels; Oklahoma, 528,300 barrels against 529,700 barrels; Louisiana, 255,300 barrels against 256,100 barrels; Kansas, 168,000 barrels against 169,300 barrels; New Mexico, 111,600 barrels against 112,300 barrels; Wyoming, 65,600 barrels against 62,200 barrels; Michigan, 57,000 barrels against 60,000 barrels; Arkansas, 53,700 barrels against 53,900 barrels; Pennsylvania, 47,800 barrels against 50,100 barrels; Illinois, 49,000 barrels against 45,800 barrels; Kentucky, 16,000 barrels against 14,500 barrels; New York, 14,800 barrels against 15,500 barrels; Montana, 14,000 barrels against 13,900 barrels; West Virginia, 9,900 barrels, unchanged; Ohio, 9,200 barrels against 10,000 barrels; Colorado, 4,600 barrels against 5,500 barrels; Indiana, 2,600 barrels against 2,300 barrels.

Texas faces two-day a week shutdowns

An immediate increase in the number of days Texas oil wells must be closed down each week was indicated Friday by the Texas Railroad Commission.

"It appears that we must close Saturday as well as Sunday," Commissioner Ernest O. Thompson announced. "At the hearing today we learned that there is pipe line proration in KMA and West Texas, and Cayuga purchasers asked for a cut in the allowable there."

"This indicates that the crude oil market is slow, and that we may have to add Saturday shutdowns," he said.

Thompson said that the new order might be issued at any time, and indicated he had no idea how long such orders might be in effect.

"The entire commission is agreed on this," Thompson emphasized. "I have talked with Commissioner Smith and he is in accord with the program which has been sponsored by Judge Terrell and myself. We are all in Harmony on this."

"I have not supported the holiday program," Smith said in a prepared statement, "believing the end in reducing production could be accomplished by an uniform reduction in allowables throughout the oil producing areas in Texas. However, if it is proven conclusively that such a plan is not feasible or practicable, then I shall cheerfully go along with the holiday program.

"There have been no differences between my associates on the commission and myself touching fundamentals and salient points of the oil industry . . . Our differences have been solely on methods," Smith said.

At the statewide monthly proration hearing held earlier, one operator requested a 5-day week during the month of September as a means of putting an end to pipe line proration in West Texas.

The Texas allowable without the Sunday shutdown was 1,637,802 barrels daily on August 18. The allowable with the Sunday shutdown, however, is about 1,413,736 barrels daily. This was 15,136 barrels less than consumer demand of 1,398,600 barrels daily as estimated by the Bureau of Mines for the month of September. It should be noted that the Bureau of Mines estimate was 20,800 barrels higher for September than it was for August.

Tide Water Associated Oil Company requested a reduction of approximately 3000 barrels daily in the allowable for the Cayuga field, Anderson County. It pointed out that it had requested a cut in April when the market for oil from this field was materially reduced, but that the commission had continued to fix the allowable at about 10,000 barrels daily.

Tide Water asked that the allowable be cut to 7000 barrels daily, effective September 1, on the basis of a 6-day week. It estimated that this was a thousand barrels daily more than needed.

Operators in the field protested against the cut and asked that the commission set a special hearing, which request was granted. The hearing is to be held on August 30 at Austin.

KMA operators told the commission that most wells which were without connections last month had been taken care of, and that this problem was no longer a serious threat. They asked that the present allowable of 32 barrels per well daily be continued through September. Although the pipe line companies are now taking only 24 barrels daily, the operators said they had prospects for a new market for the extra oil.

Yates operators requested an increase in the allowable for that field in order to prevent waste which they said was taking place because of the low rate of flow. Since last year the allowable for the field has been decreased from thirty-five thou-

[*Continued on page 62*]

Oil at the Capitols

Justice Department may seek to make gasoline a utility . . . Venezuela import tax slash fought . . . Pennsylvania investigation to start again

Arnold suggests Congress make gasoline a utility

Major oil companies have built a "toll bridge" between the independent dealers and their market which may result in enactment by Congress of legislation declaring gasoline a public utility, it was charged August 19 by Assistant Attorney General Thurman Arnold.

In discussing the anti-trust laws in a radio address, Arnold cited examples of the situations in which the Department of Justice has found it necessary to act, among others the control of the oil industry by major companies.

"The very existence of the independent oil companies of America is threatened because the major oil companies stand between them and access to the market," he said. "This has happened in a way which is partly legal under our present laws and partly illegal.

"The major oil companies, by an aggressive sales policy, have acquired so many filling stations that it is very difficult for an independent to obtain a foothold," he explained. "They, by nationwide advertising have created a situation where the public will not buy gasoline made by independents unless it is sold under the trade name of the larger oil company.

"The temptation to use this toll bridge to coerce others and to fix prices to turn that waste into a profit is often irresistible. We are not prosecuting major oil companies because we have evidence that they have so used it.

"Such situations raise this question for congress to consider," Arnold said. "If a monopoly power is obtained by legal means, to what extent should the unregulated exercise of that power be allowed to private individuals?

"This goes beyond the anti-trust laws," he admitted. "Yet, I conceive that part of the duty of an enforcing officer is to call the attention of Congress to cases where the laws are inadequate. It should prosecute the abuse of power and at the same time indicate situations which create irresistible temptations which will lead to further abuses in the future unless they are changed."

Excise tax reduction on imports seen as ruinous

Collapse of the petroleum and coal industries of the United States was pictured before the Committee for Reciprocity Information August 15 as a possible result of any reduction in the excise taxes on imported oil in the negotiations of the proposed reciprocal trade agreement with Venezuela.

A stream of witnesses, headed by representatives of the oil industry, told the committee that reductions in the taxes would be ruinous and might result in substantial increase of unemployment.

The proposed reduction of the oil taxes is the most important concession to Venezuela listed by the State Department for consideration in the negotiation of the treaty.

The views of Texas on the proposed reduction were presented in a brief submitted by Ernest O. Thompson, member of the Texas Railroad Commission and chairman of the Interstate Oil Compact Commission, who was unable to appear personally.

Outlining the history of conservation in Texas, Thompson declared that the most pressing problem facing the oil industry is the finding of an adequate market for its production, a stituation which has necessitated drastic curtailment of allowables.

"The demand for crude petroleum in this country, although it has been persistently increasing for many years, has not been able to keep pace with the rate of discovery, particularly in Texas, within the last five years," the committee was told.

"The discovery and development of of oil fields in this state is progressing so rapidly that it seems likely that during 1939 the allowable production for all wells in the state will of necessity be reduced to the minimum amount authorized by the conservation statutes.

"This drastic program of curtailment, in which Texas has been joined by other oil producing states, has resulted in a satisfactory adjustment of inventories, with the exception of fuel oil and gasoline stocks, and it has preserved stability in the oil industry thus far.

"A policy which would throw an additional volume of heavy crude, such as Venezuelan crude, into the industrial fuel oil markets of this country would produce an inevitable result—the collapse of the petroleum price structure in our domestic market."

With the flow of petroleum imports controlled by the present excise taxes, the brief pointed out, the industry has been able to estimate with a reasonable degree of certainty the supply of foreign oil which will enter the domestic markets and have been able to gauge and regulate satisfactorily the amount of domestic production necessary to meet market demand. Should the domestic markets be subjected to the impact of a large volume of imported oil, they could not absorb it without a readjustment in the price structure, which would necessitate the abandonment of thousands of stripper wells.

If the market for foreign oil is materially broadened, Col. Thompson warned, there may be a return of 10-cent-a-barrel oil.

Failure of the administration to offer any argument in favor of the proposal to reduce the taxes was criticized by Russell B. Brown, general counsel of the Independent Petroleum Association of America.

"The nature of the hearing so far as the petroleum industry is concerned would seem to require us to show cause why the present tax on imports should not be lowered," he commented. "Normally, we would be confronted with some argument for doing the thing sought to be done and then be requested to show cause why it should not be done."

Brown questioned whether the reduction of the taxes would accomplish the purposes of the reciprocal tariff act to expand foreign markets for American products, restore the standard of living of American workers, overcome domestic unemployment, increase the purchasing power of the American people or regulate the admission of foreign goods in accordance with the characteristics and needs of various branches of American production.

Challenging the moral right of the administration to reduce the taxes in the face of the policy frequently reiterated by congress of providing the machinery whereby the domestic industry could regulate its production and avoid waste, Mr. Brown declared there should be a sound governmental policy to support the industry in its conservation efforts.

Since foreign companies control the Venezuelan oil industry, he pointed out, Venezuela as a country would gain little or nothing through a reduction in the taxes. On the other hand, the United States Government would lose not only the revenues from the excise taxes, over 61 percent of which were collected from Venezuelan oil, but royalties from production on public lands, which naturally would be lessened by a flood of foreign oil.

Wages paid by domestic oil companies are much higher than those paid in Venezuela, he pointed out, and the domestic wage scale could not be maintained in the face of heavy imports of low-cost foreign oil.

Reduction of the taxes, he also contended, would affect industries other than oil, such as the railroads and the equipment manufacturers.

M. C. Mallon of the Pennsylvania Grade Crude Oil Association and E. B. Reeser of the Oil Producers Agency of California also appealed to the committee to recommend adversely against the reduction of taxes, pointing out that the lowering of the rates would seriously affect the industry in their states, particularly in Pennsylvania, where wells are under the pump with a very low average daily production.

Any action adverse to the domestic industry, it was declared by Reeser, might deal it a fateful economic blow.

Representatives of the coal interests appearing in opposition to the proposed concession outnumbered oil men three to one and were equally vehement in their plea for protection.

At the present time, the committee was told by Representative Jennings Randolph (Dem., W. Va.), Venezuelan oil is offering "vicious competition" to the bituminous coal industry. "Any further import increases of Venezuelan oil may be ruinous to the coal indus-

try and add materially to the relief rolls, thereby placing an additional burden upon the federal and state governments," he said.

Any revision of the existing taxes, the congressman declared, should be upward rather than down, but he strongly protested against any cut in the rates on the ground that inclusion of such a change in a reciprocal trade agreement would foreclose action by congress.

Randolph declared that in 1937 the 28,000,000 barrels or more of oil imported from Venezuela displaced 6,000,000 tons of bituminous coal.

Views similar to those of Randolph were expressed for the anthracite branch of the coal industry by Representative J. Harold Flannery (Dem., Pa.), and by a number of representatives of various coal organizations in both the bituminous and anthracite fields.

Pennsylvania considers tax on fuel oil

For the second time during the present administration, a measure to impose a sales tax on fuel oil has been placed before the Pennsylvania state legislature. The proposal calls for a tax of 3 cents a gallon and was introduced by Representative Albert L. O'Connor, Democrat of Cambria County, who is vice chairman of the house committee on mines and mining.

A proposal to levy a tax of 2 cents a gallon on fuel oil failed to emerge from committee when made before the 1937 legislature.

Recreation of Pennsylvania investigation becomes reality

Pennsylvania's oil industry investigating commission, once outlawed by the state supreme court, was recreated last week with announcement by Governor George H. Earle's office that a new bill recently passed by the special session of the legislature had been given executive approval. Governor Earle had left Harrisburg earlier in the week for a vacation in Mexico.

The executive office sent names of three members of the former commission to the senate for confirmation, while presiding officers of the senate and house immediately reappointed Senator E. J. Thompson, of Centre, and Representative Michael Chervenak, of Cambria, completing the five-man body.

Executive appointees are Judge Ralph H. Smith, Pittsburgh, chairman representing the public; John E. McComb, Rouseville, representing producers, and William H. Godfrey, Germantown, representing distributors.

Signed by the governor before he left for his vacation, the new law designates the commission as an agency of the legislature to determine whether state regulation of the industry is necessary and to make recommendations on this subject to the legislature. Authority to subpoena any "proper person, corporation, partnership or association" and to require production of any records it may desire was granted the commission. Refusal to recognize a subpoena would subject a person to contempt proceedings in court. An appropriation of $20,000 is provided for the inquiry, which Senator Thompson said is two-thirds completed.

The supreme court held the old commission to be invalid as it was created by a joint resolution rather than by a bill, the procedure which was followed in recreating the commission.

In Legal Circles

Justice Department indignant over charges that insuring of Sinclair with James Roosevelt aided in getting trust charges against firm dismissed

Deny tie-up between Roosevelt and Sinclair

Charges by Alva Johnston in a recent Saturday Evening Post article that James Roosevelt, son of the President, had been instrumental in securing dismissal of the federal indictment against E. W. Sinclair, were indignantly denied by the Department of Justice in a formal statement August 15, in which it was declared that the action was based solely on the evidence in the possession of the Government.

The article charged that James Roosevelt obtained insurance business from Harry F. Sinclair while Sinclair's company was involved in the Madison oil trust case.

"This statement is a direct reflection upon the integrity of the four attorneys of the Department of Justice who were solely responsible for the conduct of the grand jury proceedings and the subsequent dismissal of the indictment," the department declared, in refuting the implication that there was any connection between the placing of insurance by Harry F. Sinclair and the dismissal of the indictment against his brother.

The department traced the whole history of the Madison case, explaining that Earl Sinclair and Sinclair Refining Company; were among the individuals and companies indicted by the grand jury in the fall of 1936, and that in December of that year more complete evidence was presented before a new grand jury, which returned other indictments covering the same violations.

"The second indictment was necessary because of an alleged technical defect in the impaneling of the first grand jury," the department explained. "When the more complete evidence was presented to the second grand jury, and when the superseding indictments were returned, the indisputable facts disclosed that neither Earl Sinclair nor certain other defendants named in the first indictment had anything to do with the conspiracy, and that the facts concerned therein were unknown to them. The grand jury consequently failed to return indictments against these persons. Any other action upon the part of the grand jury would have been unwarranted.

"Verdicts were obtained on the trial of the second indictments in cases the actual trial of which consumed over five months. The second indictment involved 24 oil companies and 56 individuals. In accordance with the custom of the department, the old indictments, which had been superseded, were dismissed as a matter of course.

"The action of the Government counsel and the grand jury was based solely on the evidence in the possession of the Government, and no outside representations of any kind from any source were brought to the attention of either the grand jury or the attorneys conducting the cases. These proceedings were conducted uninfluenced by James Roosevelt or anyone else, and it may be of interest to note that none of the attorneys in this case had any acquaintance or communication with James Roosevelt directly or indirectly.

"While it is impossible for the Department of Justice to deny every false charge leveled against it, the implication contained in Mr. Johnston's statement was so utterly baseless that the department was unwilling to permit it to pass."

Hamilton properties go to reorganized corporation

Virtually marking the close of six years of litigation, started in 1932 when creditors brought bankruptcy proceedings, Federal Judge George W. McClintic at Charleston, West Virginia, last week directed trustees of the bankrupt Hamilton Gas Company to turn over the firm's physical properties to Hamilton Gas Corporation.

The firm, which owns leases, production and pipe lines in southern West Virginia and Kentucky, was the first to seek reorganization under Section 77-B of the bankruptcy law when it became effective in June, 1934.

Incorporators of the new company are Clarence L. Harper, E. McClain Watters and Samuel McCreery, all of Philadelphia; B. A. Wise, Charleston, and Ronald M. Craigmyle and David Vanalstyne, of New York.

Florida suit dismissed

Judge J. C. B. Koonce of the Circuit Court of Lake County, Florida, has dismissed the suit of William G. Blanchard vs. Laraba Corporation et al. Blanchard was assessed with the charges in the suit, and a substantial bond was stipulated in event of an appeal. Defendants included Laraba Corporation, All Southern Investment Corporation, All Florida Land Company, Peninsular Exploration, Gulf Exploration Company, and Seaboard Oil Development Corporation.

Following dismissal of the suit, All Southern Investment Corporation and Laraba Corporation procured a restraining order preventing the filing of *lis pendens* against their properties.

Market Situation

Prices remain unchanged, although kerosene has tendency toward lower quotations . . . Storage of both gasoline and crude are reduced further

Favorable conditions bolstering markets

The oil industry's market situation remains comparatively favorable, prices being fairly steady for both crude oil and refined products, despite some local over-supplies of crude and free offerings of gasoline and some other finished products.

Tending to bolster the whole market structure is the continued effective curtailment of crude oil production during August and the similar moderate runs of crude to refinery stills.

The curtailment efforts are expected to result in some further improvement during the month in the industry's inventory situation.

Storage Reduced

In the early weeks of August these expectations were being fulfilled, the industry having been able to make substantial withdrawals from the stocks of both crude oil and gasoline.

The crude oil inventories even at present levels are exceptionally small, but further withdrawals from gasoline stocks would be economically desirable.

Fuel oil stocks also are too large, having continued to increase steadily, and being now one-third greater than at this time last year, although demand is not equaling the 1937 levels.

Gasoline Market

Shipments of gasoline against contract are continuing active, but sales in the open market have been somewhat light, and supplies have been freely offered.

In the Oklahoma market some refiners last week were quoting kerosene at prices ⅛-cent a gallon lower than previously, although others were maintaining the old prices. In the Chicago market, too, kerosene prices were tending to sag.

Fuel oil prices were generally unchanged last week, although quotations on some of the light oils were raised ⅛-cent a gallon in some instances in the Mid-Continent.

K-M-A situation has been improved

The situation in the K-M-A (Texas) field has improved considerably. Pipe lines that provide the market outlet for the high gravity oil produced in the field have fulfilled their promise to serve the unconnected wells. Only a few isolated wells are in need of outlets. Several district refiners that propose to enter the field shortly with gathering systems may encounter difficulty in obtaining centralized well connections, unless operators can be induced to break away from what is assumed to be permanent pipe line outlets. All purchasers, excepting the Gulf Refining Company, pipe line division, are restricting their crude runs to 75 percent of the authorized daily allowable.

No complaints have been registered regarding illegal production in the K-M-A field. The Railroad Commission has anticipated trouble from this source, and in order to avoid hot oil activities has transferred experienced enforcement men from the East Texas field to work with its local staff. This move was made when old shallow pumping leases within the deep area began showing substantial production increases, although the wells failed to make their allowable quota prior to the completion of deep producers. Operators charged the increased output of marginal wells to more efficient operations and cleanout work.

EAST TEXAS CRUDE CUT 15 CENTS A BARREL

Effective at 7 A.M. August 20, the East Texas Refining Company will pay but $1.20 per barrel for crude produced in the East Texas field. This represents a cut of 15 cents. The announcement was made by Freeman Burford, president, late Friday evening.

Although the move was regarded by some a political one in view of the coming Texas elections, the East Texas market has not been in a favorable position for some time. Cheaper crudes from other fields have cut into the normal East Texas markets, particularly some of the newer ones in North Louisiana and South Arkansas. Even some of the East Texas refineries had switched to the cheaper sources.

South Oklahoma wants investigation of reduction

Reduction of purchases in 14 southern Oklahoma fields by Carter Oil Company and Pure Oil Company August 1 brought protest asking for federal investigation from a meeting of producers August 17. A message was sent to Oklahoma Senator Elmer Thomas which made this plea:

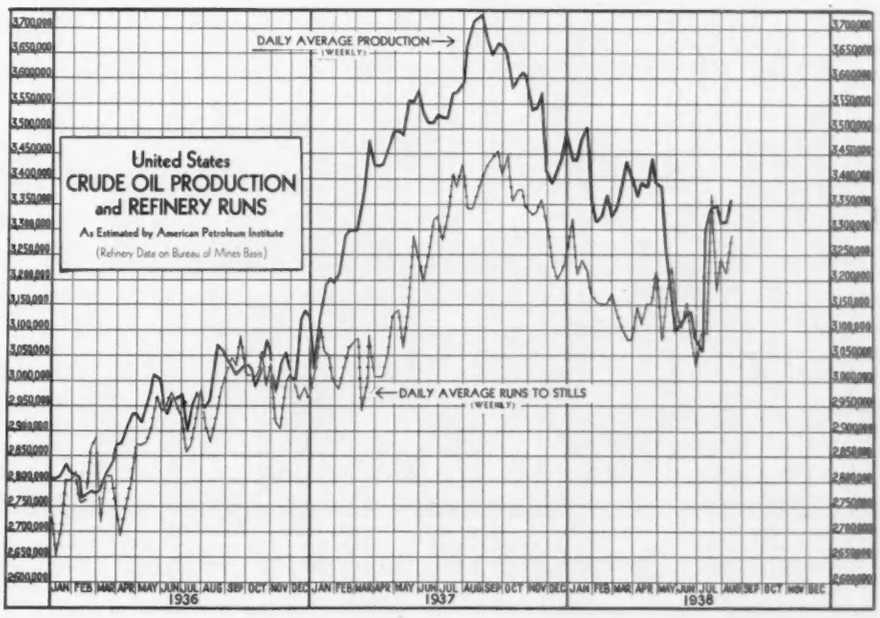
"We respectfully request your aid in remedying the situation to save the vast oil reserves and economic life of the people."

Relief for curtailment of production in some of the fields may come when reconditioning and enlarging are finished on the refining plant at Ardmore, which will operate under the name of Ben Franklin Refining Company. The plant was purchased two weeks ago by W. C. Berry of Kansas City and Dr. Sidney Born of Tulsa. The plant was part of the property of Wirt Franklin Petroleum Corporation in receivership.

The new owners say the capacity will be doubled, which will give it a capacity of around 5000 barrels daily.

More recently these interests have purchased Healdton Pipe Line Company with a line from here to the Healdton field as well as Hewitt and Wheeler. Purchase has been made of the stored oil of the Coline Oil Company. Both concerns were affiliated with the Santa Fe Railroad and the deal involves furnishing fuel oil to the carrier concern.

Other output of the refinery will be



sold by Bell Oil & Gas Company, Tulsa, which has a refinery at Grandfield.

Statistics of industry continue satisfactory

The latest weekly statistics of the petroleum industry reflect continuation of fairly satisfactory conditions. The prevailing operations at wells and refineries are moderate, and some additional improvement has been made in the industry's inventory situation, as stocks of both crude oil and gasoline have been reduced. Still on the unfavorable side, however, is the fuel oil situation, as stocks continue to mount, although already at excessive levels.

Production and Runs

United States crude oil production in the week ended August 14 was up about 40,000 barrels from the previous week's level, but it was 9.6 percent lower than in the corresponding period last year. The well output averaged 3,359,900 barrels daily.

Crude oil runs to stills increased even more, rising 80,000 barrels to a new daily average of 3,295,000 barrels. At that level, the refinery activity was 1.3 percent lower than in the corresponding week last year.

Gasoline Situation

Despite the stepping up of refinery runs, the industry took about 1,000,000 barrels of gasoline out of storage in the week ended August 14, bringing the total supply in storage in the United States down to 74,387,000 barrels. That quantity was 7.6 percent larger than the amount held one year previously, and was still excessive, as indicated by the fact gasoline demand has continued to run around the same levels as last year.

CRUDE OIL PRICES

Complete tables of prices paid for crude oil at the well in principal fields were shown on pages 48 and 49 of the August 1 issue. The complete schedule appears only in the first issue of each month.

Fuel Oil

The seasonal additions to fuel oil storage were continued in the week ended August 14, stocks having increased about 1,500,000 barrels more, or to 146,261,000 barrels. At that level, they were 33.5 percent larger than at the corresponding time last year. On the other hand, fuel oil demand in recent months has been running more than 10 percent under last year's levels.

Crude Stocks

Fluctuations of crude oil stocks continued to reflect the comparatively strict control of production that prevails. Total stocks of crude in the United States were reduced over 1,000,000 barrels in the week ended August 6, coming down to 287,406,000 barrels. Those stocks are 6.6 percent smaller than the supply on hand at this time last year. The crude oil inventory situation obviously is quite satisfactory.

Trends of United States Production and Stocks

Figures are from American Petroleum Institute weekly reports, except those on crude stocks, which are from Bureau of Mines weekly reports

WEEK ENDED	Crude Oil Production (Barrels Daily)	Crude Runs to Stills (Barrels Daily)	Crude Oil Stocks (Barrels)	Gasoline Stocks (Barrels)	Gas & Fuel Oil Stocks (Barrels)
July 31, 1937	3,591,900	3,425,000	308,250,000	70,872,000	108,209,000
August 29	*3,731,450	3,425,000	309,506,000	66,997,000	112,111,000
September 25	3,666,300	*3,455,000	307,974,000	65,620,000	116,472,000
October 2	3,647,450	3,400,000	309,036,000	65,266,000	117,076,000
October 30	3,602,950	3,345,000	307,140,000	66,836,000	121,070,000
November 27	3,425,800	3,325,000	304,156,000	68,544,000	121,616,000
December 25	3,492,600	3,245,000	303,294,000	74,437,000	118,659,000
January 1, 1938	3,436,600	3,320,000	303,468,000	77,291,000	118,660,000
January 29	3,357,650	3,170,000	304,286,000	84,844,000	118,793,000
February 26	3,322,800	3,170,000	305,167,000	90,719,000	120,958,000
March 19	3,322,550	3,080,000	306,380,000	*93,192,000	122,067,000
March 26	3,405,600	3,080,000	307,557,000	92,858,000	122,979,000
April 30	3,396,150	3,215,000	307,147,000	91,339,000	128,270,000
May 28	3,098,650	3,150,000	301,583,000	87,946,000	134,315,000
June 25	3,083,900	3,025,000	293,463,000	82,412,000	137,801,000
July 2	3,058,550	3,095,000	291,666,000	80,634,000	138,903,000
July 9	3,296,250	3,095,000	290,469,000	79,893,000	140,587,000
July 16	3,343,100	3,195,000	289,310,000	78,721,000	142,068,000
July 23	3,349,050	3,180,000	287,585,000	76,366,000	143,041,000
July 30	3,316,400	3,240,000	288,514,000	76,864,000	144,294,000
August 6	3,317,850	3,215,000	287,406,000	75,380,000	144,699,000
August 13, 1938	3,359,900	3,295,000	.....	74,387,000	146,261,000
August 14, 1937	3,718,600	3,340,000	†307,922,000	69,087,000	109,644,000
Change in past year	—9.6%	—1.3%	—6.6%	+7.6%	+33.3%

* All time peak. † Stocks, August 6, 1937.

Oil prices continue generally unchanged

Prices in the industry have remained mostly unchanged within the past 10 days, despite some indications of unsteadiness in the markets for crude oil and products.

No changes have been made in crude postings, and revisions of product prices lately have been confined to kerosene and fuel oil, the quotations on gasoline having remained the same.

Natural Gasoline

Natural gasoline, grade 26-70, was priced generally in the Mid-Continent markets f.o.b. refineries at 3¼ cents a gallon, and sales were reported at the same price f.o.b. Breckenridge, Texas.

Gasoline at Refineries

U. S. Motor gasoline ranged in the Oklahoma market last week about as follows: 62 octane and below, 4¾ to 5 cents a gallon; 63 to 66 octane, 5 to 5⅛ cents; 67 to 69 octane, 5¼ to 5½ cents; 70 to 72 octane, 5½ to 5¾ cents.

Corresponding prices in the Chicago markets were 4⅜ to 5 cents, 4⅝ to 5¼ cents, 4¾ to 5⅜ cents, and 5 to 5⅝ cents.

In East Texas the most common gasoline, 60-62, 400 end point, was priced generally from 4½ to 4⅝ cents a gallon.

Kerosene prices f.o.b. Oklahoma refineries ranged from 4 to 4¼ cents a gallon for the 41-43 water white grade, and from 4⅜ to 4⅝ cents for the 42-44 water white grade; and corresponding prices in the Chicago market were 3½ to 4⅜ cents and 3⅝ to 4⅜ cents.

Fuel Oil

Fuel oil prices were not materially changed in the past week. In the Chicago market range oil was priced from 3⅝ to 4⅛ cents a gallon. The No. 1 white oil was priced from 3½ to 4 cents, and No. 1 straw from 3⅜ to 3¾ cents. No. 2 straw was 3⅛ to 3⅝ cents. No. 3 oil was 3 to 3⅜ cents. No. 5 oils were 65 to 75 cents for domestic and 60 to 65 cents for industrial sales. The No. 6 oil was quoted to the usual industrial customers at 40 to 50 cents a barrel.

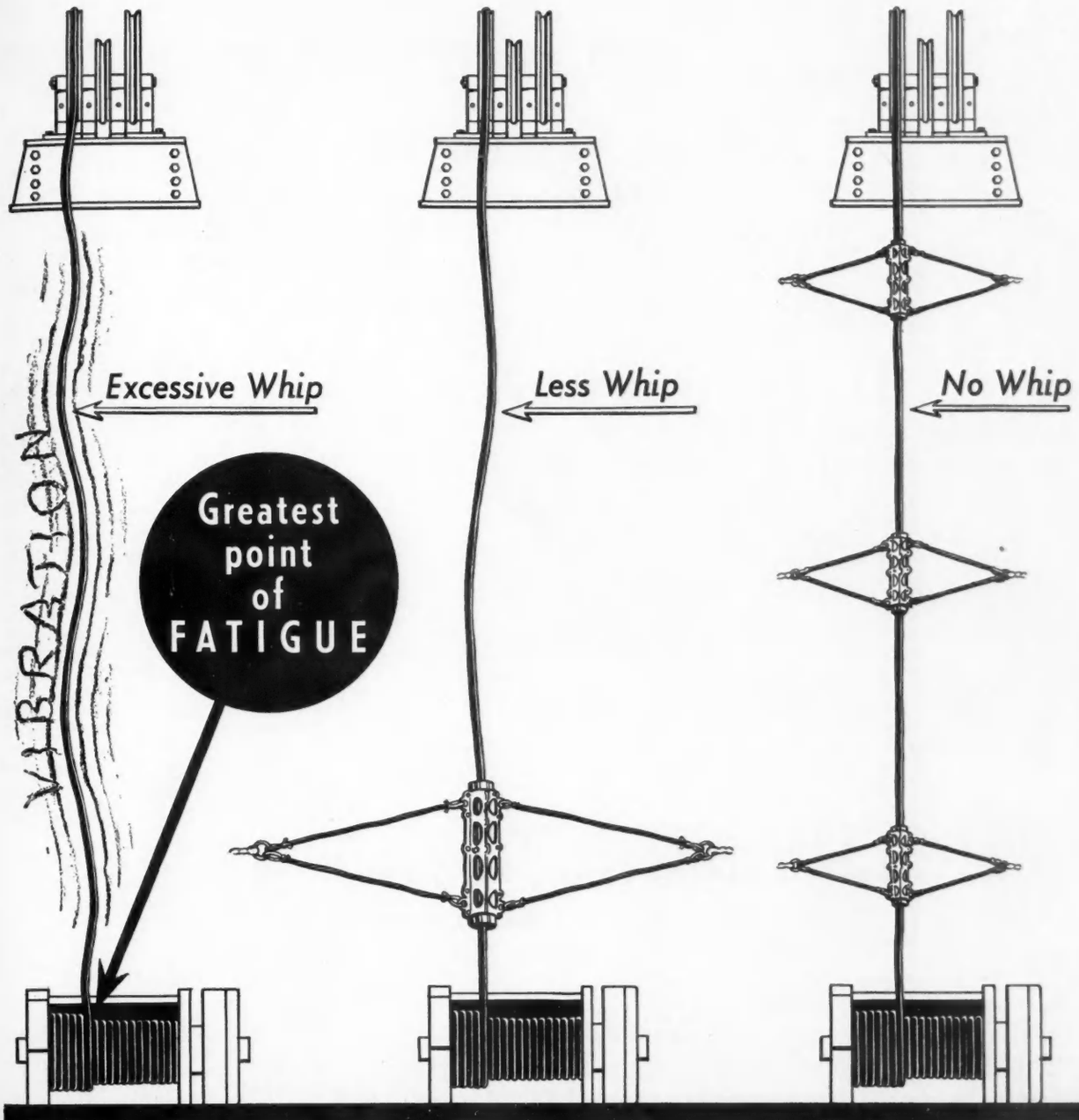
More tax evaders convicted in 1937

A total of 234 persons was convicted for evasion of gasoline taxes in the central states in 1937, as compared with 156 in 1936 and 134 in 1935, reports the Central Gasoline Tax Evasion Committee. Wichita, Kansas, St. Joseph, Missouri, and Kansas City, Kansas, were the chief operating areas of the tax evaders, with approximately half of the total convictions being obtained in the three cities.

Natural gasoline stocks continue rise in June

Production of natural gasoline dropped slightly in June, totaling 168,042,000 gallons as compared with 176,232,000 gallons in May, the daily average, 5,601,000 gallons, showing a decline of 84,000 gallons, according to the monthly report of the Bureau of Mines.

Production for the half-year, January



Note the hinging action at drum and sheave which breaks down the line at these points.

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to June, however, was slightly above the corresponding period in 1937, total output being 1,046,598,000 gallons against 964,866,000 gallons and daily average 5,782,000 gallons against 5,331,000 gallons.

No Decrease in East Texas

June production showed decreases in most of the major producing districts except the Texas Gulf Coast and East Texas, the bureau reported.

Stocks continued to increase, the total on hand at refineries advancing from 142,968,000 to 154,056,000 gallons and at plants and terminals from 132,048,000 to 137,886,000 gallons, it was stated.

Gasoline prices 28 percent below other commodities

Gasoline prices stand 28 percent below the general price level, reports the American Petroleum Industries Committee. In April, the last month for which commodity index numbers were available, gasoline prices were 67.6 percent of their level in 1923, the year generally selected as a yardstick. On the other hand, food stood at 81.1, rents 87.2, and clothing 75.1.

Taxes on gasoline, however, have increased from an average of $4.37 per motor vehicle in 1923 to $35.37 in 1937, thus counterbalancing the favorable gasoline prices now being enjoyed by the motoring public.

Crude Production

Increase of 15,700 barrels daily brings U. S. total to 3,385,475 barrels; Texas output is down again

UNITED STATES crude oil production increased again during the week ended August 20, having averaged 3,385,475 barrels daily. That was 15,700 barrels a day more than in the previous week.

At the new level, the production was, nevertheless, 52,625 barrels a day lower than the indicated average daily market demand for domestic crude, as estimated by the Bureau of Mines. Consequently, the output of the wells was low enough, apparently, to permit additional withdrawals of oil from storage, which currently are economically desirable.

As compared with the 3,385,475 barrels actual daily production in the week of August 20, the Bureau of Mines had estimated market demand for 3,438,100 barrels of domestic crude daily during August.

Responsible for the national increase in production in the past week were gains in four of the leading producing states, California, Oklahoma, Kansas, and New Mexico, and in Illinois. The other two of the six leading states, Texas and Louisiana, showed decreases.

California last week averaged 684,000 barrels daily, having had an 18,000 barrel increase, and was 35,000 barrels above its indicated market demand and 70,000 barrels above the state proration program.

Oklahoma's output of 443,400 barrels daily was about 4000 barrels higher than in the previous week and 15,000 barrels above the state allowable, but about 86,000 barrels under the indicated market demand.

Kansas production of 168,075 barrels daily was 3000 barrels lower than in the previous week and about the same amount above the official state allowable, although about 1000 barrels under demand.

Texas production declined 11,000 barrels to 1,386,400 barrels daily, and was slightly under the state allowable, although 8600 barrels a day more than the indicated market requirements.

Louisiana showed a 6725 barrel decrease, as production dropped to 256,900 barrels daily, thereby conforming closely with both the state allowable and indicated demand.

United States Crude Oil Production

Estimates Compiled by The OIL WEEKLY

DISTRICT OR STATE	Bureau of Mines Recommendation (Daily in August)	State Allowable in Aug.	BARRELS DAILY FOR WEEK ENDED Aug. 20	Aug. 13
TEXAS—				
Texas Panhandle	.....	.....	72,200	73,600
North Texas	.....	.....	76,600	79,400
West Central Texas	.....	.....	29,300	29,800
West Texas	.....	.....	218,800	219,800
East Central Texas	.....	.....	98,700	101,400
East Texas Field	.....	.....	439,200	440,800
South Texas	.....	.....	236,500	237,400
Texas Gulf Coast	.....	.....	215,100	215,200
Total Texas	1,377,800	1,394,269†	1,386,400	1,397,400
CALIFORNIA—				
Long Beach	.....	.....	57,000	56,900
Santa Fe Springs	.....	.....	32,800	33,800
Huntington Beach	.....	.....	33,400	33,300
Dominguez	.....	.....	26,000	25,200
Ventura Avenue	.....	.....	33,700	33,700
Midway-Sunset	.....	.....	64,200	50,300
Kettleman Hills	.....	.....	66,200	69,200
Wilmington	.....	.....	97,700	96,400
Others	.....	.....	273,000	267,400
Total California	649,300	615,000*	684,000	666,200
OKLAHOMA—				
Oklahoma City	.....	.....	123,250	116,475
Seminole Area	.....	.....	89,125	92,850
Fitts	.....	.....	39,250	42,275
Others	.....	.....	191,775	187,975
Total Oklahoma	529,700	428,000	443,400	439,575
LOUISIANA—				
North Louisiana	.....	.....	82,500	82,225
South Louisiana	.....	.....	174,400	181,400
Total Louisiana	256,100	256,715	256,900	263,625

DISTRICT OR STATE	Bureau of Mines Recommendation (Daily in August)	State Allowable in Aug.	BARRELS DAILY FOR WEEK ENDED Aug. 20	Aug. 13
KANSAS—				
Burrton-Haven	.....	.....	9,375	9,400
Russell County	.....	.....	26,025	24,700
Silica	.....	.....	12,350	11,300
Others	.....	.....	120,325	119,800
Total Kansas	169,300	165,500	168,075	165,200
NEW MEXICO	112,300	107,000	106,600	106,400
MICHIGAN	60,000	.....	49,500	52,300
ARKANSAS	53,900	.....	56,200	55,775
MOUNTAIN STATES—				
Wyoming	62,200	.....	61,600	58,600
Montana	13,900	.....	13,600	13,950
Colorado	5,500	.....	3,600	3,800
Total Mountain States	81,600	.....	78,800	76,350
EASTERN STATES—				
Pennsylvania Grade	.....	.....	75,600	77,300
Southern Illinois (New Pools)	.....	.....	45,800	30,350
Illinois-Indiana (Old Pools)	.....	.....	13,800	13,850
Others, Eastern	.....	.....	20,400	25,450
Total Eastern States	148,100	.....	155,600	146,950
Total United States	3,438,100	.....	3,385,475	3,369,775

† Daily average, considering Sunday shut-downs.

* Recommendation of Central Committee of California Oil Producers.

Bill Ferguson, laboratory chemist, is a graduate chemical engineer from Rice Institute, who spent two years in a consulting laboratory before joining TESCO.

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Pipe Line News

Turner Valley producers threaten pipe line outlet unless railroads slash rates . . . Building of Wyoming line being protested by labor unions

Labor seeks to block Wyoming line construction

Circulation of a petition among Wyoming organized labor groups asking Governor Leslie A. Miller to call a special session of the state legislature to block completion of Continental Oil Company's $2,000,000 pipe line from the Lance Creek field to the company's Denver refinery was discussed at a meeting of the Casper Trades and Labor Assembly last week. Copies of the petition would be circulated in Cheyenne, Rock Springs, Sheridan and other points.

The petition, circulation of which will be finally decided this week, would request enactment of legislation to lay a heavy tax on oil piped outside the state for processing in order to discourage completion of the pipe line.

Governor Miller, a month ago, protested the pipe line project in a communication to the interstate commerce commission, acting at the insistence of members of the Wyoming legislative board of the Brotherhood of Locomotive Firemen and Enginemen. It was argued that operation of the line would cause a great deal of unemployment among railroad men of Wyoming.

Meanwhile, George S. Colley, Jr., superintendent of construction for the S. D. Bechtel Company, contractors for the 245-mile project, assured Wyoming state officials that local labor would be used as far as possible in construction of the project. Colley met with William Jack, state auditor; Harry W. Fox, state labor commissioner, and a delegation of more than 50 laborers following complaints that nonresident labor was being given preference on the project. "It always has been the policy of the Bechtel Company never to work any hardship on any community in which it operated," Colley said, adding that an influx of transient labor into Lusk was not at the suggestion of the contractors.

A survey for a 65-mile crude oil pipe line from Glenrock, Wyoming, to Lance Creek, where it will connect with the $2,000,000 line to Denver now under construction for the Continental Oil Company, was completed last week, according to A. C. Wilkinson, Continental Company superintendent at Cheyenne. The line, to cost an estimated $250,000, will contain 50 miles of 4-inch pipe and 15 miles of 6-inch pipe. Contracts should be let within the next two weeks, Wilkinson said.

May build $15,000,000 line if rail rates are not cut

Declaring that the Turner Valley field of Alberta, Canada, has sufficient oil reserves to warrant construction of a pipe line east to Fort William, at the head of the Great Lakes, W. S. Campbell, Edmonton, chairman of the Petroleum Producers Association, predicted at Calgary last week that such a line would be constructed if the railways continue taking a "narrow view" on the demands of producing companies for lower freight rates.

"The right thing for the railroads to do is to take a trial shipment at low rates to see whether it is possible for them to compete with potential pipe line rates, before the pipe lines are ever financed or construction started," Campbell declared, adding that oil can be carried to Fort William for 60 cents a barrel by pipe lines.

Estimates on cost of such a line, made by competent engineers, ranged from 15 to 30 million dollars, the variation caused by different pipe sizes, whether separate telephone and servicing roads would have to be constructed or existing telephone lines used and roads followed.

500,000,000 Reserves

"A 10-inch line would deliver approximately 35,000 barrels daily, or 8,500,000 barrels in eight months, which is the period of navigation on the Great Lakes," said Campbell. "In 20 years it would be 170,000,000 barrels. It was estimated by competent experts that there were approximately 500,000,000 barrels of oil in reserve in Turner Valley as of December 31, 1937. Since that time the field has been extended to the north, south and west, and it is reasonable to expect that much more than this amount can be recovered from present reserves."

A solution to the transportation problem would make it possible for Turner Valley operators to place their product on the East Canadian market on a competitive basis with crude now imported from the United States. Development of other fields is absurd before the transportation problem is solved, Campbell maintained, as independent companies now are not receiving sufficient revenue to permit further development of the Turner Valley field.

McMurrey plans to build 10 miles of 6-inch line

Tyler, Texas.—McMurrey Petroleum Corporation, owner of a crude skimming and cracking plant near Tyler, proposes to build a 10-mile, 6-inch line from the Joiner section of the East Texas field to the plant site. The line will replace a larger system that was sold by the company early this year. The Tyler plant is slated to resume operations, using a limited volume of current production from the East Texas field, and processing 160,000 barrels of confiscated oil released by a Travis County District Court order July 30.

Texaco completes Centralia line

The Texas Company on March 15 completed construction of a 9-mile 4-inch pipe line connecting the Lake Centralia pool which it opened two months ago in Marion County, to Sandoval, giving an outlet to recently completed producing wells which had been shut in. The new line connects with the Illinois Pipe Line Company's carrier system, through which crude is routed to The Texas Company's refinery at Lawrenceville, Illinois.

Construction on $800,000 gas line to start soon

United Gas Pipe Line Company will build a 10-, 12- and 16-inch gas line from Katy to its main line station near Clinton, Texas, via Satsuma and Fairbanks. The line will be about 48 miles long and will cost around $800,000. It will handle a large gas reserve developed near Houston. Construction will start in a few weeks.

Looping gasoline line from Burbank to Ponca City

Work has been started on looping the full distance of the Great Lakes Pipe Line Company's gasoline line between Burbank and Ponca City, Oklahoma. The job will be welded 7-inch pipe.

New York gas rates reduced

Empire Gas & Fuel Company, Ltd., and the Hornell Gas Light Company have filed a new gas schedule with the New York public service commission which would save customers $34,500 annually. It would be the fourth rate reduction by the companies in five years, and would become effective October 1, said Vice President George W. Holbrook.

The Empire Company's successful development program in the Hebron field is credited with bringing the reduction.

Accidental deaths low in petroleum industry

Accidental deaths in the petroleum industry in 1937 stood at only half of the nation's general accidental death rate, according to a report of the American Petroleum Institute's Department of Accident Prevention. Reports covering 324,956 workers in 131 petroleum companies show a fatality rate of 36.9 deaths per 100,000 persons, as compared with the national accidental death rate of 82 fatalities per 100,000 persons in 1937, reported by the National Safety Council.

According to the study of the 101 fatalities embraced in the report, 47 percent of the deaths were caused by falls, falling objects, and other miscellaneous causes; 25 percent involved trucks or automobiles, and only 17 percent were caused by fires or explosions.

WEEK'S DRILLING HIGHLIGHTS

South Louisiana

Bancroft gas field in Beauregard Parish was converted into South Louisiana's second Cockfield oil field by a 7393-foot completion. The second producer for Bayou Des Allemands, St. Charles Parish, contributed a new sand at 9463 feet, and 4000 feet south of Valentine field, Lafourche Parish, a new sand was logged at 9318 feet. Lirette field, Terrebonne Parish, was extended 2½ miles southeast by an 11,178-foot Miocene producer. New Iberia field in Iberia Parish chalked up two new sands.

West Texas

Yoakum County's portion of Wasson field was extended 1½ miles west by a well that flowed 350 barrels before acid treatment. Schleicher County's second producer was rated at 4,000,000 cubic feet of gas.

Kansas

Barton County recorded a ¾-mile extension for Ainsworth pool. An outpost wildcat in Norton County had a showing in Kansas City lime.

South Texas

In Bee County a wildcat indicated a new Pettus sand pool. In Hidalgo County a Frio sand test on Pharr prospect made distillate and gas at 5970 feet, and preparations were being made to test showings down to 9500 feet in a deep Mercedes field hole. Duval County developed a new sand for Sweden which also extended the field 4700 feet west, the second producer for Tesoro field, and an indicated ¾-mile southeast extension for Rancho Solo in a Cole sand well. Northeast of Pearsall, a Navarro sand wildcat is showing at 3738 feet. Atascosa County's Anchorage wildcat is attempting completion in Serpentine at 2743 feet. Alice field in Jim Wells County got a new 4900-foot zone, and a wildcat 2 miles southwest of production is trying to blow out from 70 feet of Cockfield topped at 7190 feet.

Oklahoma

Between Oklahoma City and Britton fields, Oklahoma County, an uncompleted wildcat flowing 10 barrels hourly indicates another Wilcox field. The old Cement pool of Caddo County had a 1600-barrel completion in the shallow Rowe sand.

North Texas

A wildcat 4¼ miles west of K-M-A deep production logged Strawn saturation 53 feet lower than it is found on the field's west edge, and ½ mile west extension of the field was rated at 1000 barrels. A northwest outpost of Panther deep pool, Archer County, failed to qualify as a commercial pumper.

North Louisiana

A Webster Parish wildcat is conditioning hole to test 40 feet of Basal Glen Rose saturation, and a wildcat in DeSoto Parish is showing oil in the same formation at 5303 feet. Southwest limits of Lisbon field Glen Rose production were defined.

Kentucky

Two miles northwest of Corydon, Henderson County, a wildcat showing oil in McClosky was drowned out by salt water. The same fate was dished out to a Webster County wildcat south of Sebree Springs.

Michigan

A gas-oil show at 1255 feet indicated the Western Michigan play would extend out of Allegan County south into Van Buren County.

Illinois

Lake Centralia field, Marion County, got a mile northwest extension and an indicated ¾-mile north extension. Washington County's discovery well was put on the pump for 100 barrels a day; it is the first producer for the county. Eastern Fayette County field got minor extensions.

Comparison of Permits Granted for New Wells

STATE	Week Ending Aug. 20	Total this Mo.	Total this Year	Total this Date Last Year	1937 Year Total
Arkansas	3	10	159	151	240
California	34	84	796	1,024	1,584
Louisiana	21	78	863	801	1,227
Kansas	33	112	1,020	1,772	2,663
Michigan	17	65	518	642	958
Oklahoma	31	99	1,309	1,917	2,711
Texas	168	651	8,576	11,888	17,238
Total	307	1,099	13,241	18,195	26,621

Summary of Wells Completed in the United States Week Ending August 20, 1938

	Completions	Oil Wells	Gas Wells	Failures	Initial Production	Total, 1938	Total this Date, 1937
Alabama	....	....	....	....	.....	2	1
Arkansas	5	3	....	2	3,050	147	63
California	29	27	....	2	53,251	803	903
Colorado	....	....	....	....	.....	5	6
Florida	....	....	....	....	.....	....	1
Georgia	....	....	....	....	.....	1	.....
Illinois	88	62	3	23	10,060	858	114
Indiana	7	1	....	6	100	79	84
Kansas	32	20	1	11	27,767	1,104	1,690
Kentucky	16	11	1	4	1,187	484	211
Louisiana	30	16	3	11	6,529	712	596
Michigan	16	9	1	6	3,665	546	588
Mississippi	....	....	....	....	.....	11	9
Montana	3	3	....	....	175	44	121
Nebraska	....	....	....	....	.....	1	.....
New Mexico	16	13	2	1	5,292	339	457
New York	*10	10	....	....	26	*457	*777
Ohio	12	4	4	4	83	601	955
Oklahoma	55	32	9	14	3,990	1,428	2,056
Pennsylvania	*37	33	1	3	110	*1,406	*1,915
Tennessee	....	....	....	....	.....	2	.....
Texas	232	174	4	54	200,871	8,378	9,732
Utah	....	....	....	....	.....	2	.....
West Virginia	14	3	10	1	6	445	582
Wyoming	....	....	....	....	.....	73	72
Total this week	602	421	39	142	316,162	17,928	20,933
Total last week	495	346	27	122	221,039	....	.....
Total this year	17,928	12,409	1,289	4,230	12,191,761	....	.....

* Includes water-intake and pressure wells.

Oklahoma Fields

Oklahoma County wildcat has flow of 10 barrels per hour.

Pottawatomie County well showing draws two locations.

Sixth Frederick pool completion has area's largest flow.

Tulsa.—After deepening to 6766 feet the Oklahoma County wildcat of Olson Oil Company and associates, Vanek 1, SE SW NE 4-12n-3w, began flowing 10 barrels an hour August 17 from second Wilcox sand, top 6721 feet. Despite the low output and necessity of further testing, indications are that the well has opened another pool along the Nemeha ridge. It is between the Oklahoma City field and the Britton field, both producers from the Wilcox sand. Dry holes and geophysical mapping indicate only a small structure.

In the greater Seminole area, two recent strikes were put in the class of completions and each drew two locations.

In Pottawatomie County, 2 miles north of the Asher pool, Atlantic Refining treated McCurry 1 with 2000 gallons of acid, after which it flowed 570 barrels in 10½ hours from Hunton lime, 4188 to 4209½ feet. Two locations were made and a third well will be drilled. The test, NW NE SW 6-6n-4e, was to penetrate the Wilcox sand, most prolific source of oil in the Greater Seminole area, and was halted after the Hunton lime, also a source of Seminole oil, showed to good advantage. The Wilcox sand will be tested either by other wells or by drilling the Hunton lime producers deeper after this formation is exhausted.

Sale of the 80-acre lease and the discovery well, Edgeman 1, by its drillers, Young & Newsome, to J. F. Smith and Commercial Drilling Company, was followed by two new locations around this Seminole County strike, which is 2 miles west of the Little River pool. Edgeman 1, SEc 17-7n-6e, is pumping 350 barrels daily from Wilcox sand, 4378 to 4382 feet.

In Southern Oklahoma the sixth producer for the Frederick pool, Tillman County, gave indications of establishing the highest initial output for the field, as it was flowing 100 barrels an hour with tools still in the hole. It is in the Canyon lime, a 1937 discovery. One location was made as a result of the well.

As a whole, Oklahoma held to its high mark in field work, although its total of oil discovered was low. From 32 oil wells, total initial output was only 3990 barrels. The week resulted in completion of 14 dry holes, 9 gas wells and 2 abandoned locations, to remove 57 wells from the drilling report. Locations were staked for 31 new wells.

Oklahoma County Strike

Production was established August 16 in Vanek 1, SE SW NE 4-12n-3w, by Olson Oil Company after four days of testing. During this process the hole was carried to 6766 feet in the second Wilcox sand, 17 feet deeper than the bottom when casing was set a week earlier.

Saturated cores and indications of saturation from electrical logging resulted in a decision to set casing at 6717 feet and try for production from between 6721 and 6749 feet. Tubing was run and loaded with oil so compressed air could be used in an effort to make the well flow. The well was so promising that arrangements were made to broadcast the completion August 13 when a crowd gathered to watch the process. But the formation failed to respond.

The next day tubing was pulled, after swabbing failed to get the well on production. The hole was then cored to 6751 feet, then deepened to 6766 feet, present total depth. After tubing was re-run August 16 the well was loaded and swabbing started again through tubing. After the oil column had been swabbed down 3100 feet, the well started flowing by heads. During these tests it was cutting mud and fresh water. In this condition it settled down to around 10 barrels an hour.

After being shut in it built up 900 pounds pressure on the casing and 500 on the tubing. When reopened the flow became steady at 10 barrels an hour and cutting was reduced to 1 percent. The oil tested between 25 and 26 gravity with temperature of 65° F.

The well is 2 miles southeast of the Britton field and 3 miles northwest of the north extension of the Oklahoma City field. Nearby dry holes plus geological information from shooting indicate only a small producing area. The well was drilled on a block of 1680 acres, which the owners believe will cover the producing structure. The block was assembled several years back and two dry holes were drilled. Present ownership consists of Olson Oil Company, driller of the producing well, Anderson-Prichard Oil Corporation, Phillips Petroleum Company, Kerlyn Oil Company and William H. Atkinson.

Previous to starting the well, the Oklahoma Corporation Commission entered an order to require 10-acre spacing. This was asked because the block is partly on the Britton townsite. Further development on the block will not be planned until testing is completed in the discovery producer.

The other wildcat test in the Oklahoma City area, Little 1, SW SW NE 28-11n-3w, drilled by Fain Drilling Company and associates, showed salt water on a drill-stem test. This test on the southwest side of the Oklahoma City field was started as a test for dolomite production. This formation, however, was disappointing, and it was drilled to the second Wilcox sand, top 6956 feet, total depth 6988 feet. The test resulted in 24 joints of pipe filling with water in an hour and no oil showing. The second Wilcox is about 300 feet lower than it is in the nearby production at Oklahoma City. Indications are that it will be abandoned.

Development of the week thus reduced the number of wildcats in the northern Oklahoma area to three. In Garfield County Indian Territory Illuminating Oil Company is below 5600 feet in Kichin 1, C SE SE 17-22n-5w, and Champlin Refining Company is below 6100 feet in Boehm 1, SWc NE 4-24n-8w. These tests are scheduled to go to the Wilcox sand, which should be reached shortly. The Noble County wildcat of H. R. Hollenbach and associates, Mathews 1, C SW NW 9-20n-1e, is shut down at 3597 feet.

Seminole Locations

Two recent pool discoveries in the Greater Seminole area have resulted in offset locations, which indicate drilling campaigns to outline producing limits. Two locations have been made to offset the discovery by Atlantic Refining Company, McCurry 1, NW NE SW 6-6n-4e. This concern will drill Harris 1, NE NW SW 6-6n-4e, a west offset, and Spaugy 1, SW SE NW 6-6n-4e, the north offset.

After treatment with 2000 gallons of acid, McCurry 1, 2 miles north of the Asher pool, flowed 570 barrels in 10½ hours through tubing. The first hour it made 90 barrels and the last hour the flow was 50 barrels. The well was then shut in. It will continue testing while taking its 15,000 barrels as a discovery wildcat.

Production is from the Viola lime, top 4188 feet, total depth 4209½ feet. The area is looked on favorably for Wilcox sand production, and failure to get satisfactory output in the lime will result in deepening. Viola lime producers later will be deepened after this formation has given up its production.

Sale of the discovery well and 80 acres of leases around the discovery 2 miles west of the Little River pool also was followed by two locations. J. F. Smith of Shawnee and Commercial Drilling Company of Tulsa made the purchase from Young & Newsome, who drilled Edgeman 1, SEc 17-7n-6e, to get pumping production from the first Wilcox sand at 4378 to 4382 feet. The purchase included the east half of the quarter section on which the discovery well was completed.

J. F. Smith, one of the purchasers, has staked location for C. Smith 1, NW NE NE 20-17n-7e, a diagonal southwest offset to the producer, while Rogers Oil Company has staked location for Haddad 1, SWc 17-7n-6e.

The discovery well is pumping an average of 350 barrels daily.

Another sale was made following favorable showing to indicate an extension of the Wilzetta pool, Lincoln County, with C. L. McMahon, Tulsa, taking an interest in the well drilled by Indian States Oil Company. Bailey 1, NW NW NE 2-12n-5e, which is flowing from the Hunton lime at 4233 feet to 4239 feet.

The well is ½-mile south of Wilzetta production, also from the Hunton lime, and immediate drilling is anticipated to determine whether the new well is an extension or on a separate small structure. The well is producing about 300 barrels daily through tubing.

Further testing of the Okfuskee County wildcat of C. W. Titus, Lehmer 1, C NE NE 26-11n-8e, has brought a reduction in the amount of water. It flowed and swabbed 137 barrels of oil

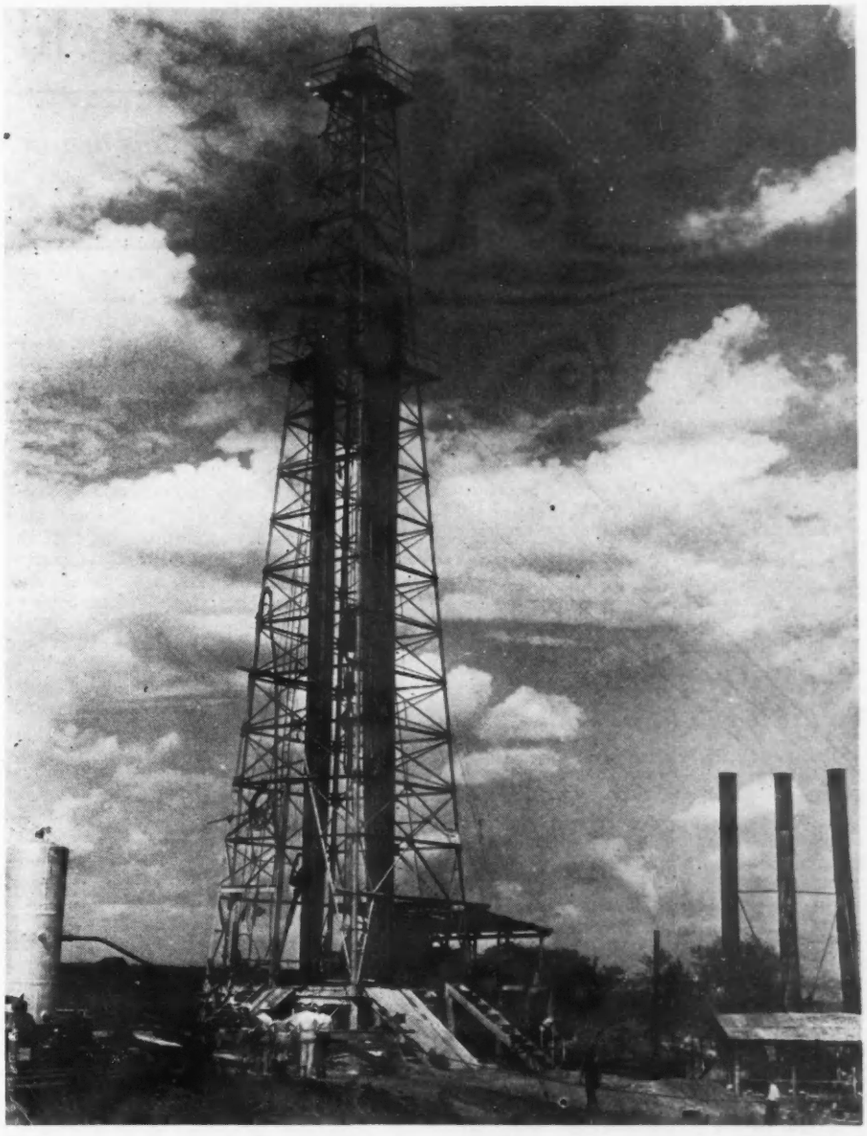
and 17 barrels of water in 24 hours. This test began showing from what is thought to be the Cromwell sand, topped at 3476 feet and drilled to 3481 feet. Later it was drilled 4 feet deeper and water came into the hole. Further testing will be necessary before it can be put in the class of a pool opener.

The largest well for the Frederick pool, Tillman County, was indicated last week, although Indian Territory Illuminating Oil Company and Foster Minerals Corporation had not completed Goodwin 1, NW NW SE 1-3s-19w, the sixth well in the field. It was flowing at the rate of 100 barrels an hour with tools in the hole.

Like the other 5 producers, it is flowing from the Canyon lime, top 3128 feet. It was cored to 3135 feet and casing set. In drilling plugs, the hole was carried to 3137 feet, where it started flowing. It filled a 500-barrel tank in less than 5 hours with tools still in the hole and had to be shut in for more tankage.

Other producers have had potentials of around 500 barrels. The two concerns, which own practically all of the surrounding acreage, have started work on Dickey 3, SE SE NW 1-3s-19w.

The east side of the Cement pool, Caddo County, came back into the limelight last week when Magnolia



Like the brilliant child who disappoints when company arrives, Vanek 1, SE SW NE 4-12n-3w, between the Britton and Oklahoma City fields, would not perform when it had a chance to go on the air August 13. The process of bringing it in was to be broadcast, and an audience collected at the site. The next day, when this picture was taken, tubing was being removed so the well could be drilled deeper. After coring and drilling another 17 feet to 6766, it began flowing 10 barrels an hour to indicate a new pool along the Nemeha ridge. Production is from the second Wilcox sand.

OKLAHOMA

Completions

Company Well and Location	Init. Prod. Bbls.	Depth
Caddo—		
Stephens' Griffen 2, se ne se 27-6n-10w	¶40	4371
Griffen 4, nwc se 27-6n-10w	¶20	4780
Thompson 2, sec nw 27-6n-10w	100	4851
Magnolia's Niles-Hopkins 5, ne nw nw 36-6n-10w	23	3387
Carter—		
Barnett's Hooks 2, ne nw sw 14-1s-3w	40	2579
Comanche—		
Wichita's Ashcraft 7, nw ne ne sw 28-2n-10w	5	458
Truitt's Fee 8, sw sw sw se 26-2n-11w	5	358
Cotton—		
Davis' Anderson 3, se sw sw 23-1s-10w	50,000 cu. ft. gas	2179
Creek—		
Gled's Escoe 2, ne se se 27-18n-8e (otd 1333 ft)	7	2649
Garvin—		
Cox's Pate 2, sw se sw 29-1n-3w	125	2338
Haskell—		
Utilities' Johnson 2, c ne se 27-8n-20e	¶0.3	742
Latimer—		
LeFlore's Orr 26, ne se se 1-6n-22e	¶8	2143
Lincoln—		
Garfield Buel's Fouquet 1, c w½ se 9-13n-6e	¶1.9	4102
Wilcox's Sac 15, ne se nw 15-14n-6e	66	3016
Sac 16, se ne sw 15-14n-6e	65	3042
Okfuskee—		
Pharoah's Holmes 1A, nw ne nw 32-11n-11e	*	2601
Mid-Continent's Ireland 3, se nw sw 10-13n-10e	70	3466
Oklahoma—		
I. T. I. O.'s Anderson 4, nw ne nw 30-11n-2w	555	3016
Okmulgee—		
Snyder-Swan's Marshall 1, se se sw 21-15n-12e	*	2709
Sooner's Funk 1, ne ne nw ne 20-16n-11e	*	2189
Osage—		
Sinclair Prairie's 8, se sw nw 22-25n-6e (pb 2749 ft)	40	2750
Chevalier's 1, nwc sw 33-27n-5e	*	3504
Pawnee—		
Thomas' Ackley 1, se se sw se 14-20n-9e (pb 1256 ft)	37	1274
Sinclair Prairie's Coyne 6, sw se se ne 17-21n-8e	12	2111
Pittsburg—		
Choctaw's Daniel 1, sw se sw 18-7n-18e	¶5.5	2207
Pontotoc—		
Continental's Hale 1, c e½ nw ne 2-1n-7e (otd 4070 ft)	250	4307
Simpson's Ill. Life 2, nec nw 28-2n-6e	100	3351
Delaney's Horn 4A, se ne ne 22-2n-7e	30	1335
Phillips' Leedy 1, nec 22-2n-7e (pb 3450 ft)	84	3996
Magnolia's Simpson 13, sw ne ne 29-2n-7e (pb 1890 ft)	*	3720
Union's Abbit 1, sw nw ne 34-3n-6e	*	3320
Superior's Northam 1, nwc ne 36-5n-4e	130	2636
Sinclair Prairie's Gordan "A" 3, ne sw ne 21-5n-5e	120	2605
McKay's Bayne 1, sec sw 16-5n-6e (pb 1680 ft)	¶2	2984
Pierce's Krolger 1, se ne sw 30-5n-7e	*	2380
Barbara's Mount 3, se ne nw nw 36-5n-7e	30	2285
Osborn's Jones 2, se nw sw 33-5n-8e	¶2	2560
Sunray's Shields 6, nw ne sw 33-5n-8e	71	2568
Pottawatomie—		
Lain's Castleberry 1, nec sw 36-6n-4e	*	1120
Darby's Hamby 3, ne nw nw 14-7n-4e	252	3172
Magnolia's Billington 3, ne nw sw 36-7n-4e	523	4228
Magnolia's Fyke "A" 3, nwc 28-7n-5e	108	2808
Alma's Curley 2, se sw nw 33-7n-5e	200	4074
Trigg's Canfield 3, sw nw sw 33-7n-5e	765	4056
Seminole—		
Ledge's Factor 3, nw sw sw se 25-5n-7e	*	2329
Westheimer's Factor 5, se ne se sw 25-5n-7e	22	2269
Indian States' Johnson 1, ne se ne 2-6n-5e (pb 2895 ft)	*	2983
Pine's Williams 7, sw nw ne 22-6n-6e	30	3614
Commercial's Bird 1, ne nw sw 14-9n-6e (pb 2600 ft)	100	4086
McBride's Haulsee 3, sw nw sw 8-9n-7e (pb 3607 ft)	*	4183
Greis' Bevins 1A, se sw nw sw 28-10n-7e	*	2623
Stephens—		
Kiester's Quinn 1A, sw sw nw se 23-1s-5w	275,000 cu. ft. gas	410
Sikes' Mulkey 7, se nw ne 16-1s-8w	20	2140
Tulsa—		
McNalley's Cosar 1A, ne ne ne ne 36-18n-12e (pb 1040 ft)	*	1315
North's Lacy 1, nw nw nw sw 1-18n-13e	*	1607
Wagoner—		
Knox's West 1A, ne nw ne 3-16n-15e	5	1050

*Failures; †Junked; ¶Million cu. ft. gas

Petroleum Company's Pau-Kune 8, NEc 10-5n-9w, came in for an estimated 1600 barrels daily from the Rowe sand, 3329 to 3349 feet. The formation is one of the best producing sands in the field. The well has not taken potential. Magnolia Petroleum Company staked location for Lackey 9, NWc 12-5n-9w, and Ray Stevens Inc. was rigging Funk 3, SW SE SE 12-5n-9w.

Tulsa.—Oklahoma completions during the past week totaled 57 wells. Of this number 32 were oil wells having a total initial production of 3990 barrels and 9 gas wells were completed to gauge 83,158,000 cubic feet total open flow. Fourteen holes were dry and two locations were abandoned.

Locations made in the state totaled 31, with Pontotoc County counting 5. Lincoln, Pottawatomie and Seminole reported 3 locations each, while Comanche, Okmulgee and Osage reported 2 each, and Caddo, Carter, Jefferson, Creek, Coal, Grant, Le Flore, Pawnee, Stephens, Tillman and Tulsa counties reported 1 new location each.

Sixth 10,000-foot test to be drilled in Chickasha

Tulsa.—Sixth Oklahoma test of the 10,000 foot variety will be drilled in the Chickasha gas field, Grady County. Interests of a score of corporations and individuals have been pooled for the rights below 3500 feet on 2,372.29 acres. Carter Oil Company, holder of 32 percent of this interest, will have charge of the venture. Location is in C SE SW 26-5n-8w.

Drilling will be by contract, which will be let this week. The specification of 10,000 feet indicates a test into the Deese member of the Glenn series, middle Pennsylvanian age. Intimated in the transaction is the possibility of drilling still deeper if geological and hole conditions are favorable at that depth.

A test of the Deese member would afford a deep test in feet, but only a shallow test geologically. The Deese member is a prolific source of oil in the old fields of Southern Oklahoma, where it is found near the surface on either side of the Arbuckle Mountains. It produces some oil in the Cement pool, Caddo County, west of the test. The small deep pool at Doyle, Stephens County, has Deese production.

Principal Owners

Principal owners of the remaining interest in the unit block are Magnolia Petroleum Company, Oklahoma Natural Gas Company, Texokan Oil Company, John B. Nicklos, J. K. Cleary, Cities Service Oil Company, J. Lesser, F. W. Ball, E. F. Corder, Little Nick Oil Company, Skelly Oil Company, Lone Star Gas Company, Westervelt-Noble Oil & Gas Company, Gulf Oil Corporation and Stanolind Oil & Gas Company.

The Chickasha gas field, discovered in 1922 by John B. Nicklos, is now fully developed as a shallow gas supply. Its early gas was from sands of Permian age. Later drilling went into upper Pennsylvania beds. Two wells have made small amounts of oil, but not of commercial quantity. This will be the first deep test in the field.

The location is in the general area that has drawn the previous five deep tests for Oklahoma. First of these, drilled in the Cement pool, Caddo County, in 1931 by Mid-Kansas Oil & Gas Company (now Ohio Oil Company) and Ramsey Petroleum Company, Preston-Culp 6, a dry hole at 10,079 feet. The second deep venture gave Oklahoma its first oil below 10,000 feet when Denver Producing & Refining Company went to 11,230 feet in A-Dah-Noe 1, Caddo County. This test, known as the Binger well, had extremely high bottom hole pressure, but failed to make commercial production. It was plugged back and is now producing around 50 barrels daily. The third test and second for the Binger area, Caddo County, was a dry hole. It was Denver Producing & Refining Company's Sha-Cam 1, total depth 10,084 feet. The three were all Caddo County tests. In Stephens County Coline Oil Company's Johnson 1 reached 10,009 feet, but was plugged back to shallower than 10,000 feet where it is now producing 45 barrels daily on gas lift. The only deep test for Grady County and fifth of the list for Oklahoma, was abandoned in April of this year. It was Gulf Oil Corporation's Thomas 1, C SW NW NW 14-4n-5w, which went to 11,415 feet, the drilling depth record for Oklahoma.

Kansas Field Developments

Ainsworth gets important east extension.

Big well enlarges Zenith to north.

Wichita.—Field work in Kansas brought no new fields and but one important extension. The Ainsworth field, Barton County, was extended three quarters of a mile east by Western Kansas Oil & Refining Company, whose Gage 1, W½ NW 2-17-13w, established potential of 1800 barrels from Arbuckle lime at 3326 feet. This opens more territory for drilling in the area.

Although an extension of little consequence an outstanding well in the Zenith pool was E. H. Moore, Inc., which had potential of 6325 barrels from the Misener sand at 3814 feet. The well is on the north edge of development. Structurally it was low but the output set a record for the field.

Farther west in Stafford County, Atlantic Refining Company is drilling deeper in its wildcat well, Wise 1, NWc 13-24-14w, which has been making oil and gas from the Kansas City lime. The gas flow of 6,000,000 cubic feet daily was killed and 7-inch casing set at 3755 feet. The hole may be drilled to the Arbuckle lime.

A small showing from Kansas City lime in the Norton County wildcat of Vickers Petroleum Company was significant because the test is one of the outpost wells in Kansas. It is 25 miles from any other Kansas production and twice that distance from the cluster of fields at the north part of the Central Kansas uplift. At 3450 feet in the Kansas City lime it began showing oil and continued for 5 feet. Cores are being taken below that depth. The well is Bozarth 1, C SW SW 16-5-24w, the southwest corner of Norton County, one of the northern counties of Kansas.

In Rice County the wildcat of Cities Service Oil Company, No. 1 Flora, SW NE 12-19-10w, showed salt water on drill stem test in the Arbuckle lime, total depth 3338 feet. Water rose 1470 feet in 45 minutes. The hole may be plugged back to test the Kansas City lime.

Another outpost wildcat for the northwestern part of the state has been started by Mabee Consolidated of Tulsa and Ramsey Oil Company of Wichita, who have staked location, Ryan 1, C NE SE 27-8-32w, Thomas County on a block of 28,000

KANSAS

Completions

Company Well and Location	Init. Prod. Bbls.	Depth
Barton—		
Shell's Hoffman "A" 4, cwl nw ne sw 7-16s-13w	2043	3349
Gardner's Krug 1, swc se 16-16s 13w	*	3414
Helmerich's Stettinger 6, ne sw ne 1-16s-14w	2600	3339
Shell's Erlich "B" 2, sec sw 1-16s-14w	1996	3348
Ehrlich "B" 3, nec sw 1-16s-14w	2424	3361
Stanolind's Panning 13, se ne ne 2-20s-11w	1385	3284
Gulf's Kesselman 1, se se sw 23-20s-11w	1734	3280
25-20s-11w	2429	3262
Schoepel "A" 5, nwc ne 26-20s-11w	1878	3284
Butler—		
Hich's Heymon 1, nw sw nw 33-23s-5e	*	2700
Neff's Drumm 1, c ne se 12-26s-4e (pb 1990 ft)	25	2455
Nat'l Ref., Wentz 1, se ne nw 7-27s-6e	*	3211
Ellis—		
Wentz's Stackhouse 1, c n½ s½ sw 23-12s-18w	1003	3690
Carter's Gottschalk 1, nwc se 36-15s-18w	*	3477
Harvey—		
Johnson's Dyck 1, c se ne 19-23s-3w	100	3344
Ness—		
Continental's Shinner 1, c n½ w½ se 13-18s-26w	1086	4490
Rice—		
Duwe's Remmert 1, swc nw 3-18s-9w	*	3341
Cities' Guldner 4, swc 9-18s-9w pb 3169 ft)	*	3244
Mission's Habiger 6, sw ne nw 5-18s-10w	2799	3017
Sinclair Prairie's Sharpe 3, sw nw ne 7-20s-9w (pb 3100 ft)	285	3277
Davis' Studer 1, nw ne se 5-20s-10w	*	3430
Rooks—		
Power's Hammond 1, c sw¼ 34-6s-18w	*	3725
Sunray's Senecal 1, sec sw 26-10s-19w	*	3609
Russell—		
Coralena's Hefferman 1, ne se sw 34-14s-13w (pb 2926 ft)	804	3026
Central's Rouback "B" 2, ne nw se 15-14s-15w	686	3209
Darby's Michaelis 9, ne sw se 36-15s-14w	2157	3308
Sedgwick—		
Nat'l Ref.'s Trustee 1, sec ne 8-27s-2e (pb 3261½ ft)	420	3262
Fee 1, se ne se 36-27s-2e (pb 2501 ft)	¶1	3201
Stafford—		
Sinclair Prairie's Bunselmeyer 2, ne se se 36-21s-13w	*	3767
Sinclair Prairie's Krey 3, se sw nw 14-24s-11w	1356	3810
Atlantic's Lyons 2, c e½ ne ne 28-24s-13w	557	4116
Woodson—		
Cleveland's Life 2, sw ne se ne 34-25s-15e	*	1447

*Failures; †Junked; ¶Million cu. ft. gas

acres. Contract calls for a test to 5200 feet.

Sale of a Bemis field lease by Blackwell Oil & Gas Company to Pryor & Lockhart, Wichita firm, was completed last week. It involves 80 acres, the east half of the southeast quarter of 15-11-17w, with two Arbuckle lime wells producing.

Auction Board of Trade opens in Tulsa September 30

Tulsa.—First sale of oil properties by the recently formed Auction Board of Trade will be held in the Coliseum at Tulsa September 30. Thereafter the sales will be held the fourth Friday of each month.

Earl Sneed and associates have formed the organization as a method of providing a method of exchange for leases, royalties, fee lands, drilling blocks, oil payments and oil field equipment. Colonel E. Walters of Skedee, Oklahoma, auctioneer for the Osage Indian tribe and the University of Texas, will cry the sale.

Associated with Sneed, who is president, are Earl Sneed, Jr.; O. C. Evans, secretary-treasurer; Robert E. Garrett and Earl Westmoreland, Jr., geologists; Luella Vickery Dunn and Oleta Reilly, listing clerks.

Turner Valley allowable increased to 48 percent

The Alberta Petroleum and Natural Gas Conservation Board issued a temporary emergency order increasing the allowable production of Turner Valley wells from 37 to 48 percent, effective at 8 a.m. August 15, to meet a situation caused by a quick upturn in the market for Turner Valley crude.

W. F. Knode, board chairman, said a new proration order would be issued this week based on new potentials that have been established by tests since early in the month.

Last week's order was the first affecting proration issued by the recently-created board, previous restrictions on production having been made by Royalite Oil Company, Ltd., which company operates the only pipe line from Turner Valley to Calgary, refining and shipping center.

Alberta's Petroleum & Natural Gas Conservation Board recently took steps to prevent waste of oil and gas and overcrowding of wells on the Turner Valley structure by restricting wells to 1 on each 40 acres.

Under special circumstances, a permit may be granted to drill a well on a smaller tract or a second well on a 40-acre tract, but the government board will retain full control over its production and may curtail the yield to any extent.

Wells must be located at least 660 feet from the boundary of the property owned by the company, and not less than 300 feet from a road allowance or right of way, a dwelling or a church, and not less than 1350 feet from any gas or oil well. With few exceptions, wells at present drilled or drilling in Turner Valley are limited to 1 on a 40-acre tract. In several cases, however, companies owning 80 acres or two adjoining 40-acre tracts planned to drill 3 tests on their property.

New Mexico Fields

Lea County activity bolstered by 12 new operations. Wildcat gets unusually thick Delaware sand body.

Hobbs, N. M.—Field activity in Lea County was bolstered by 12 new operations the past week, with 5 areas participating in the new work. Vacuum field accounted for 4 projects, and Eunice and Langlie areas 3 each.

The presence of an unusually thick sand body in the Delaware established by a wildcat failure in southwestern Lea County may encourage additional prospecting along the east rim of the basin. W. L. Todd et al's Lemon-Tide Water 1, C NW SW 17-21s-32e, entered the Delaware sand at 4460 feet, or 830 feet sub sea, and logged almost solid sand from 4510-4608 feet. The test was abandoned at the latter depth, carrying 3000 feet of salt water. Geological markers indicate that it is about 1100 feet lower structurally than Culbertson & Irwin's Sue Richardson 1, located 2½ miles to the northeast. The latter was abandoned in sulphur water at 3863-72 feet, or 55-64 feet sub sea, and is east of the Delaware basin.

Rim Course not Projected

Wildcatting in the basin sector of Lea County has not been sufficient to project the course of the rim, which is believed to be capable of producing oil if good sand conditions are present.

James Mascho et al's Cloyd-Conoco 2, C SW SE 20-22s-33e, only remaining active Delaware prospect in the county, was drilling salt and anhydrite at 3510 feet after landing a protection string of 8-inch pipe. It is a west offset to a 3516-foot test junked by the group early this year after a prolonged fishing job.

Continental Oil Company and Herschbach Drilling Company's State 1-K-29, C SW SW 29-16s-37e, 6 miles southeast of Lovington, did not encounter additional saturation in drilling to 5217 feet. Formation tester was used with negative results at 4905 feet and 4932 feet after coring thin sections of oil saturated lime.

Vacuum field has 19 rigs in operation, and derricks are up for 6 additional tests. The Texas Company's State 2-R, C NW NE 6-18s-35e, southeast edge of production, flowed 151 barrels natural in 7 hours through tubing from lime at 4540-4675 feet. The company's State 1-S, C NW SW 35-17s-34e, a new operation, was drilling at 1180 feet. Ohio Oil Company's State-McCallister 2, C NE SW 25-17s-34e, flowed 49 barrels natural the first hour and 42 barrels the second hour when tested at 4700 feet. Operations have been started on the latter's State-Warn 1, account 2, near C NW NW 6-18s-35e, and State-Bridges 1, C NE NE 20-17s-34e, a northwest outpost. Shell Petroleum Corporation is expanding its development program in the field, having made location for State 1-B, C SE SE 30-17s-35e, which was drilling below long surface pipe landed at 1580 feet.

The Texas Company's Falby 3-A, C SE NW 8-22s-37e, offsetting production in the Penrose area, flowed 89 barrels fluid, 2 percent bs&w, in 21 hours through ¾-inch choke after using 2000 gallons of acid at 3740 feet. Lem Peters et al's T. O. May-Repollo 2, NW NE NE 34-22s-37e, has set up machine to drill in this area. Repollo Oil Company farmed out the site for ⅛ over-riding royalty.

Anderson & Prichard Oil Corporation, owner of 14 wells in the Langlie sandy-lime field, rigged up to drill Harrison-Carlson 3, SE NW SE 22-25s-37e, and Stuart 2, SW SW NW 11-25s-37e. Ted Weiner et al's G. A. Smith 2, NE SE NE 4-25s-37e, has been spudded with cable tools.

Three Border Locations

Three border locations were assigned the Eunice field. The Texas Company's State-Lieu 15-H, C SW NE 20-20s-37e, near the junction with the Monument area, has rigged up. Shell Petroleum Corporation's State 4-H, C W½ NE SE 13-21s-35e, is on the west flank. Intermediate territory between the Eunice and Penrose fields is the site of Gulf Oil Corporation's Mattern 2-E, C NE SW 1-22s-36e. It is an east offset to the company's Mattern 1-E, which flowed 185 barrels oil natural in 3 1/3 hours through open tubing from lime at 3730-90 feet.

Twin Oil Company's J. G. Hair 1, C SE SW 33-21s-37e, located at the junction of the Hardy and Penrose fields, was drilling at 600 feet. Continental Oil Company et al's Jack 1-A-29, NE NE NE 29-24s-37e, west side of the Mattix area, flowed 264 barrels initial through ¾-inch choke after a 280-quart nitro shot at 3450-3595 feet. Broken pay was logged at 3525-3605 feet, with an elevation of 3275 feet.

NEW MEXICO Completions

Company Well and Location	Init. Prod. Bbls.	Depth
Eddy County—		
Nash & Windfohr, Stevens 5-A, c se sw 13-17s-30e	300	3450
Repollo, Parke 4-A, nw se nw 22-17s-30e	365	3450
Otero County—		
Turner et al, Everett 1, c se se 34-22s-13e	*	3945
Lea County (Cooper)—		
Repollo, Whitten 5-B, nw nw ne 4-24s-36e	75	3725
Lea County (Eunice)—		
Continental, State 4-E-17, c sw nw 17-22s-36e	¶6.3	3880
Gulf, Mattern 1-E, c nw sw 1-22s-36e	960	3790
Shell, State 3-H, se ne 13-21s-35e.	468	3907
Lea County (Penrose)—		
Magnolia, Brunson-Argo 2, c ne ne 9-22s-37e	290	3726
Lea County (Langlie)—		
Anderson-Pritchard, Harrison-Carlson 2, nw ne se 22-25s-37e	750	3366
Stuart 1, c e½ sw nw 10-25s-37e.	500	3437
Lea County (Lynn)—		
Western Gas Co., Matkins-Gulf 1, c se se 15-23s-36e	¶14	3853
Lea County (Mattix)—		
Continental et al, Jack 1-A-29, ne ne ne 29-24s-37e	264	3605
Parker Drlg. Co., G. L. Erwin-Texas Co. 2, c w½ nw sw 35-24s-37e..	500	3481
Lea County (Monument)—		
Great Western Prod., State 1-C, c ne sw 7-19s-37e	35	4081
Lea County (Vacuum)—		
Texas Co., State 2-R, c nw ne 6-18s-35e	750	4675

*Failures; †Junked; ¶Million cu. ft. gas

North Texas Development

Wilbarger test showing although structurally low.

Low allowables reducing K-M-A activity.

Wichita Falls.—Development of production from the Strawn horizon in southeastern Wilbarger County at a lower structural position than the K-M-A field gained encouragement the past week. Target Drilling Company's W. T. Waggoner 1, NE SW NE H&TC Section 27, Block 6, 4¼ miles west of nearest K-M-A deep production, logged oil saturation in lime at 4183-4200 feet and 4210-25 feet. This wildcat was drilling lime at 4250 feet to fulfill depth contract, and will plug back for a production test. Top of lime was called at 3920 feet, or 53 feet lower than Consolidated Oil Company et al's James 1, recent west outpost completion for K-M-A, but the first oil saturation was considerably lower structurally on the wildcat's log.

Southeast corner of Wilbarger County has been conceded deep oil prospects since last March when Lloyd H. Brown et al's W. T. Waggoner 1, SE NW SE H&TC Section 33, Block 6, located 1¾ miles southeast of the new project, logged oil saturated sand at 4087-95 feet, with top of lime at 3999 feet. No water was reported in deepening to 4266 feet, where the test was junked while trying to set liner. Consolidated Oil Company et al's G. B. Ancell 1, NE SW Section 35, 1 mile north by east of Target Drilling Company's wildcat, was drilling near the 2000-foot level, and will furnish valuable geological control of the area.

Rated potential of 1000 barrels was indicated by Consolidated Oil Company et al's Julia James 1, SE SE NE H&TC Section 16, Block 7, recent ½ mile west extension for K-M-A, after 140-quart nitro shot at 3935-75 feet, with broken sand logged at 3935-84 feet. Top of lime was logged at 3840 feet, being lower than two failures to the southeast. W. B. Omohundro and Harvey Drilling Company's D. R. Preston 1, SE NE H&TC Section 27, Block 7, slightly north of the narrow west trend of production, logged top of lime at 3790 feet, and was abandoned at 4018 feet in sandy-shale. The big lime marker was logged higher structurally than producers to the west and southwest, but the Strawn section was void of sufficient saturation to make a producer.

K-M-A accounted for 14 new locations the past week, but operations were deferred on all but three of the new projects. Field activity is tapering off due to the reduction of production allowable to approximately 21 barrels daily for the month. Survey of field work accounts for 168 operations, including 51 locations; 52 tests in process of completion; and 36 projects drilling with rotary below the surface pipe. Miscellaneous listings account for 29 operations.

Continental Oil Company and Petroleum Producers Company's State Asylum 1, southeastern Wichita County discovery, was drilling lime at 5285 feet with spudder. It is carrying 500 feet of oil in hole from upper pay passed up at 5179-5228, and no increase was noted in deepening. This wildcat produced 1194 barrels of oil in 8 days after using acid, then declined to infrequent oil flows. Production is from the Bend lime section, and the test is slated to be carried to the Ellenberger.

L. T. Burns et al's Kate Ahrens 2, SEc Section 127, northwest outpost for the Panther deep pool, Archer County, failed to qualify as a commercial pumper after using 3000 gallons of acid in upper Strawn at 3931-71 feet. The hole filled 1600 feet with oil and 1000 feet with salt water. It may be deepened to the lower Strawn near the 4300-foot level. Retsal Drilling Company's Mrs. C. J. Key 1, A. J. Richardson Survey A-356, south central Archer County 4500-foot wildcat project, was drilling lime at 3800 feet.

Second Walnut Bend test headed for Ordovician

Wichita Falls, Texas.—Deepening operations are underway on the Sinclair Prairie Oil Company's S. H. Putman 1, second test for the Walnut Bend area, northeastern Cooke County, with the Ordovician as its next objective after testing dry at a plugged-back depth in the Deese sandy-lime. Situated 1650 feet north by west of the company's flowing discovery, Putman 1 plugged back from 4983 feet to 4916 feet and yielded 210 feet of rotary mud in 40 minutes with packer set at 4877 feet. It was previously reported as showing salt water when a formation tester was used at 4971-83 feet. The company is prepared for a deep test, carrying open hole below 1114 feet, where 13-inch pipe was cemented with 500 sacks.

Mildred Oil Company's L. C. Netherly 1, located about 1 mile southwest of the discovery of Collinsville deep pool, western Grayson County, tested salt water at 3973-87 feet. The first sand, carrying minor oil saturation, was topped at 3868 feet. An attempt may be made to deepen the hole.

Clay County's two deep wildcat projects failed to encounter additional showings in deepening the past week. Walter H. Gant et al's Barney Edwards 1, 1½ miles southeast of Walton, was coring Ordovician lime at 6135 feet, having tested dry at 5994-6016 feet. L. T. Burns et al's M. M. Lyles 1, 13 miles south of Henrietta, was drilling hard lime at 5136 feet.

In Childress County, W. A. Aggers and J. P. Stewart's Schluter-Loter 1, C SW SW W&NW Section 422, Block H, a mile north of Kirkland, was drilling at 5610 feet in white and brown lime, carrying slight oil stains. It is the third test for the Kirkland geological feature.

TEXAS PANHANDLE Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Carson County—		
Cree & Hoover, Cunningham 1	¶8.7	3387
Texoma Nat'l Gas Co., Jordan-Brown 2-T	¶34.5	2535
Gray County—		
Magnolia, Haggard 12	164	3299
Hutchinson County—		
Drilling & Explor. Co., Pond 7	422	3083
Watkins 22	425	3012
Holmes et al, Lyall 6	485	2721
Phillips, Thompson 7	556	3205
Smith Bros. Refinery Co. Umphries 4	741	3143

*Failures; †Junked; ¶Million cu. ft. gas.

NORTH TEXAS Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Archer County—		
Andrews et al, Andrews 1-A, blk 17	*	1075
Underwood Drl. Co. et al, Campbell 23-B, sec 1378	*	997
Clay County—		
Beasley et al, Shumake 2, blk 4	127	1154
Bowers & Browning, Shumake 2, blk 4	168	1145
Rugeley, Tr., North Texas Co. 1, blk 49	*	1735
Tanner et al, Rigsby 7, blk 2	5	230
Cooke County—		
Hutton et al, Trubenbach 1	*	968
Texas Co., Trubenbach 9	55	813
Walterscheid 12	8	728
Denton County—		
Bolivar Drl. Co., Knox 3	*	1990
Wells, Dodson & Pearson, Dailey 1	*	1978
Jack County—		
Big Six Oil Co., Smith 4	45	2361
Grace & Barrow, Bloodworth 1, blk 1	10	339
Sewell et al, Edwards 1	*	402
Throckmorton County—		
Slusher et al, Gray 1, sec 2233	*	549
Wichita County (Jackson-Canyon)—		
Madden-Goldsmith-King Oil Co., Jackson 1, blk 20	300	2800
Panhandle-Christie, Jackson 1-A, blk 23	435	2633
Wichita County (K-M-A)—		
Browning et al, Lewis 1-A, blk 20	560	3825
Burk. Roy. Co., Burnside 1	350	3997
Burns et al, First Nat'l Co. 22, blk 26	800	3858
Consolidated Oil Co. et al, James 1, sec 16	400	3984
Deep Oil Dev. Co., First Nat'l Co. 9, blk 26	328	3845
Munger 16-A, blk 25	600	3909
Pace 5	632	3936
Egger et al, Preston 1, sec 20	856	3876
J. E. Farrell & Co., Waggoner Bros. 5, lot 30	560	3895
Geier Bros.-Jackson, Mitchell 3, sec 1	712	3898
Grace & Woods, Hodges 4-a	440	3944
Kadane-Griffith Oil Co., Mangold 7, blk 38	848	3792
King Oil Co., Big Wichita River 5	712	3785
King Oil Co.-Clark, Wigley 1-B, lot 24	*	4354
King Oil Co.-Perkins-Cullum, Pettit-State 1, sec 19	1000	3884
Pettit 2, sec 27	1200	3865
Lewis Prod. Co., Mangold 6, blk 36	1768	3855
Mitchell Oil Co., Mitchell 4-C, lot 11	920	3848
W. B. Omohundro-Harvey Drl. Co., Preston 1, sec 27	*	4018
Retsal Drl. Co., Seay 2	1144	3869
Shell, Kempner 1, blk 17	770	3878
Sinclair Prairie, Martin 3, sec 12	300	3800
M. Staniforth & Co., Martin 2, sec 36	342	3901
Martin 3, sec 36	326	3826
Sunray Oil Co., Mangold 9, blk 39	840	3799
Mangold 10, blk 37	736	3767
Wallace et al, Logan 2-A, blk 21	760	3833
Wichita County—		
Pois & Schulz, Foster-Allen 2-L	*	1303
Powers et al, Denny 7	3	593
Denny 8	15	588
Wilbarger County—		
Cosden Pet. Corp.-Consolidated, Waggoner Est. 35-B, sec 31	25	2320
Wise County—		
Latex Oil Co., Smith 2	*	4083
Young County—		
Brazelton Bros., McBrayer 2, sec 1904	*	690
Dollins et al, Cole 2, sec 1465	†	709
C. J. Kleiner-H. Y. Oil Co. & West, Davis 12-B, sec 1487	5	574
Mudge Oil Co., Harrison 7, sec 3407	125	3931

*Failures; †Junked; ¶Million cu. ft. gas.

West Texas Fields

More drilling in Crane County field discouraged.

Extension area of Wasson to be center of activity.

Midland, Texas.—The performance of the first three wells drilled in the oil pool uncovered last April in northeastern Crane County on University lands does not encourage additional development.

The Texas Company's University 1-G, NEc Section 7, Block 30, 1¼ miles northwest of the discovery pumper, registered the highest structural position, and was carrying 600 feet of oil in hole from pay at 3185-3220 feet when Sulphur water was encountered at 3472-3490 feet. A small pumper is expected when the hole is plugged back and given a nitro shot. Top of solid lime was logged at 3000 feet, with an elevation of 2642 feet.

Magnolia Petroleum Company's University 1-15 SWc Section 15, 1¼ miles southeast of the company's discovery, pumped 127 barrels oil after a nitro shot and acid treatment at 3267 feet. Sulphur water at 3327 feet was plugged off. Top of lime was called at 3075 feet, with an elevation of 2637 feet. The pumping output of this new completion and the original well declined sharply.

The area is on a strike between the Church & Fields and Gulf-Waddell fields, and has been rated as prospective oil territory for a number of years.

To Be Active

The west extension provided the Yoakum County sector of the Wasson field by Gulf Oil Corporation's Moore 1, SW NE NW Section 897, which flowed 350 barrels of 32.9 gravity oil natural from lime at 4980-5100 feet, will likely become an active drilling center. The well is being given a three-stage treatment of 10,000 gallons of acid, and the first stage of 1000 gallons only required from 300 to 500 pounds pressure. It is 1½ miles west of Helmerich & Payne Inc.-Continental Oil Company's Dowell-Ohio 1, which flowed 623 barrels of 35 gravity oil initial through ¾-inch choke after using 2000 gallons of acid at 4950-5035 feet.

The Texas Company's Randall 1, C NE NE Section 835, south offset to the original northwest extension well for the Wasson area, swabbed 2½ barrels oil hourly after plugging back from 5145 feet to 5136 feet to exclude bottom hole water. Oil pay at 5085-5141 feet was treated with acid before plugging back. Magnolia Petroleum Company's Lynn 1, located 1¾ miles northwest of production, was drilling at 4700 feet, having logged top of brown lime at 4040 feet, with an elevation of 3644 feet.

Extension of the Yoakum County portion of the Wasson field 1 mile to the east is to be undertaken by Honolulu Oil Corporation, which is making location for Kendrick 1, near SWc Section 825.

Phillips Drilling Company's O'Brien 1, ½ mile south of Plains, was drilling lime at 5360 feet. James A. Mascho et al are credited with a proposed wildcat test on a 5-section block in the east portion of Yoakum County. Location may be assigned to Section A558, Block D.

H. K. Riddle and Sam Yingling's Barrier-Gulf 1, C NE SE Section 6, Block D, near center of the east border of the county, shut down for water at 1915 feet.

Skelly Oil Company's Ellwood 1, Hockley County wildcat, logged first water at 5032 feet, with an elevation of 3409 feet, and the fluid level increased to 1700 feet when the hole was deepened to 5100 feet.

Forgeron and Olson Drilling Company's Lockhart-Brown 1, southwestern Andrews County wildcat that has been in the process of completion since last May, pumped 30 barrels oil the first 24 hours and declined to 16 barrels on the fourth day. It has a total depth of 4780 feet. The broken lime pay was shot with nitro and given multiple acid treatments.

Gas production rated at 4,000,000 feet daily was developed by John M. Cooper and Cardinal Oil Company's Bert Page 2, C NE SE GH&SA Section 40, Block L, Schleicher County, from lime at 5441-45 feet. Operations were halted to move back the boiler. This second producer for the county is about ¾ mile southeast of Cooper et al's Page 1, which gauged 13,800,000 feet of sweet gas and a spray of high gravity distillate late in 1935 after a nitro shot and acid treatments at a plugged-back depth of 5560 feet. It was carried to 6257 feet to try for production in the Ordovician. The new gasser is lower structurally, having logged top of lime at 5340 feet, or 3051 feet sub-sea.

Magnolia Petroleum Company's Geo. Sealy 7-46, NE SE NE Section 46, Block F, located on the east edge of the Magnolia-Sealy pool, northern Ward County, flowed 432 barrels initial through 1-inch choke after a 200-quart nitro shot in sandy-lime at 2745-2850 feet. The company has skidded rig to drill Sealy 8-46, NE NW NE Section 46. Sinclair Prairie Oil Company's Geo. Sealy-Magnolia 2, SE SE SE Section 47, offsetting prolific wells, filled 150 feet with oil, then swabbed dry from pay at 2835-50 feet. No production increase was noted in drilling beyond 2932 feet. This area was discovered by Magnolia Petroleum Company in 1930, but competitive drilling did not get under way until northeast extensions early this year yielded attractive wells.

WEST TEXAS Completions

Company Well and Location	Init. Prod. Bbls.	Depth
Andrews County (Fuhrman)—		
Fuhrman Pet. Corp., Ford 11	1400	4455
Crane County—		
Magnolia, University 1-15	127	3327
Crane County (Gulf-McElroy)—		
Gulf, McElroy 177	474	3057
Crane County (Sand Hills)—		
Ardrey, Tr., Tubb 1	†	2740
Ector County (Foster)—		
Shell, Witcher 2-A	859	4176
Stanolind, Cowden 12-B	1134	4159
Witcher 4	141	4173
Ector County (Goldsmith)—		
Cities Service Oil Co., Cummins 6-C	974	4287
Magnolia, Slator 7	81	4273
Phillips-Pure, Cowden 35	1420	4157
Ector County (Harper)—		
Lee Drl. Co.-York & Harper, T. P. Land 6	3208	4175
Texas Co., Parker 3-B	1514	4210
Wentz et al, Moss 6	2455	4130
Ector County (Wildcat)—		
Sinclair Prairie, Johnson 3-A	*	4610
Fisher County (Rotan)—		
Montour Prod. Co., Barker 1	*	3582
Gaines County (Wasson)—		
Conoco & A. G. Carter, Langdon 3-44	601	4985
Howard County—		
Magnolia, O'Daniel 6	494	2800
Moore Bros. Corp., T. P. Land 8-A	733	2785
Jones County—		
N. H. Martin & Son, Wyatt 1	15	1663
Wyatt 2	*	1750
Loving County (Mason)—		
Shell, T.P. Land 1-A (2nd hole)	†	3705
Menard County—		
Hartzell-Nawn & O'Hara Synd., Wilhelm 1	*	655
Pecos County (Pecos Valley)—		
Arnold Oil Co., Scharff-Blackman 4	*	1856
Union O&M Co., Magnolia-Lesenich 1-D	332	1866
Pecos County (Taylor-Link)—		
Lee Pet. Corp., University 20	10	1729
Stonewall County—		
Lawson et al, Pumphrey-General Crude 1	*	3534
Upton County (McCamey)—		
Cardinal, Wooley-Shell 16	130	2183
Ward County—		
Gulf, O'Brien 99	436	2770
W. P. Luse & Ice, Blair 2	215	2096
C. V. Lyman & Childress Roy. Co., Brillhart-Skelly 1	*	2950
Rixford et al, Crump 1	*	3057
Sinclair Prairie, Archenhold 13	420	2988
Sealy-Magnolia 1-47	305	2851
Winkler County (Kermit)—		
Magnolia, Walton 168	888	3260
Walton 170	1801	2930
Walton 171	2608	2925
Walton-State 15	892	3254
T.P. Coal & Oil Co., Thornberry 6	761	3075
Yoakum County (Bennett)—		
J. L. Crump-Black Bros., Bennett 2-B	2019	5250
Yoakum County (Wasson)—		
Helmerich & Payne-Continental, Dowell-Ohio 1	623	5035
Texas Co., Smart 2	171	5037

*Failures; †Junked; ¶Million cu. ft. gas.

Texas drilling permits total 168 during week

The Texas Railroad Commission last week approved permits for drilling 168 new wells in Texas, 6 less than were allowed the week before.

Two permits were approved in the East Texas field, 1 in Gregg and 1 in Upshur County. Thirteen locations were reported from the remainder of the East Central Texas area.

The Gulf Coast section headed the list with 46 locations, while Southwest Texas operators reported 33, including 11 in Duval County.

Permits for drilling 33 new wells in West Texas were approved by the commission, including 13 in Ector County, while 15 locations were reported from the West Central area.

There were 21 permits allowed in the Panhandle, including 11 in Hutchinson County. North Texas producers reported 5 new locations.

Carbon dioxide gas can be made directly from natural gas by oxidizing the carbon molecule to CO_2 in the presence of superheated steam. The hydrogen is freed, and the carbon dioxide is dissolved in suitable agents such as triethanolamine or water.

Natural gas returned to the reservoir to increase ultimate recovery by sustaining initial energy is still valuable as natural gas long after the crude is exhausted.

East Texas Fields

Sabine County wildcat has gas blowout

Shreveport.—Following a gas blowout at 5645 feet in Glen Rose or Travis Peak, Hugo Allen and associates last week were trying to dislodge 4-inch drill stem hung 40 feet off bottom in Mrs. Jennie Brooks 1, Isaac Low Survey, Sabine County, Texas. While operators were coming out of the hole preparatory to coring in a porous lime section just encountered, the well blew out, making an unestimated amount of gas that required mud to kill after 3 hours of effort. Subsequently another blowout occurred that had to be killed with mud. As soon as drill pipe is recovered operators plan to core.

In the same county, Humble Oil & Refining Company has secured 6500 acres of an 11,000-acre block recently assembled near the village of Geneva by Pioneer Exploration Company (E. B. Larue and associates).

Arkansas Fuel Oil Company was plugging back to test the Henderson horizon, logged at 5980 feet (elevation 217 feet) in Wallace Johnson 1, Alexander Johnson Survey, Marion County, Texas, 1 mile southwest of a Hill horizon gas well that is 2½ miles southwest of Glen Rose lime production at Jefferson. The test had shown 30 million feet of gas in drill-stem test in the Henderson. It tested salt water with a showing of oil when tested in the Dees horizon.

The Texas Company's Claude Adams 1, Thomas Cox Survey, deep test in Panola County, drilled ahead below 10,386 feet in black shale.

Seeking production along a supposed lateral fault 2½ miles northwest of the Lodi nose of the Rodessa field, Earl Bateman Drilling Company is moving in for J. A. James 1, located 934 feet south of north line and 467 feet west of east line of 813-acre tract, Ambrose Douthette Survey. Contract depth is 6500 feet or 50 feet in the Young horizon of the Glen Rose.

H. H. Temple of Shreveport has assembled a block of 6000 acres around the Henry Martin Survey, east Harrison County, for a proposed 6600-foot test to start by November 1.

EAST TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Joiner Area—		
Gulf, Thrash 13 (78.28-ac)	7500	3720
Hunt Oil Co., Bradford 20-B (98.15-ac)	250	3642
Bradford 20-D (176.3-ac)	200	3605
Magnolia, Perkins 13 (77.06-ac)	4200	3665
Sun, Mason 7 (36.46-ac)	1500	3639
Sutton & Hawkins, Vinson 7 (21.6-ac)	2000	3613
Kilgore Area—		
Atlantic, Griffin 21 (85.88-ac)	4500	3636
Beren et al, Holt-Shell 9 (68½-ac)	96	3668
Delta Drl. Co., Christian 6 (50-ac)	3800	3644
Gulf, Clayton 11 (50-ac)	5500	3551
Humble, Crim 181 (914.51-ac)	8200	3587
Magnolia, Radford 43 (252-ac)	5000	3679
Radford 44 (252-ac)	4300	3676
Shell, Laird 8-B (48.82-ac)	8000	3678
Spivey 18 (102.45-ac)	8800	3746
Tide Water Associated, Watson 7 (23.85-ac)	7200	3610
Longview Area—		
Arkansas F. O. Co., McKinley 17-B (69.01-ac)	7600	3652
Cities Service, Akin 19 (100-ac)	8500	3614
Cushing Drl. Corp.-Joe Long, Owens 32-A (209-ac)	2000	3624
Humble, Edwards 44 (271.6-ac)	3600	3677
Shelton 7 (43-ac)	4000	3696
Rancho Oil Co., Moyers 9 (50-ac)	5500	3642
Shell, Landers 26 (132.99-ac)	5000	3791
Stanolind, Lathrop 31-B (114.8-ac)	2000	3615
Lee 13 (67.19-ac)	2500	3623
Stanolind-Falcon Co., Newman 2 (19.82-ac)	1500	3672
Stewart Holdings, Lathrop-Tidal 4 (18.93-ac)	1200	3598
Sun, Loden 20 (100.58-ac)	6800	3656
Franklin County (Talco)—		
Humble, Wims 6 (172.31-ac)	326	4298
Freestone County (Cayuga)—		
Amerada, Berk 6 (1057-ac)	2500	4027
Carter - Gragg Oil Co., Harwell-Magnolia 1-A (40-ac)	2800	4024
Henderson County (Flag Lake)—		
Texas Co., Nolan 2	*	3087
Houston County (Navarro Crossings)—		
Humble, Hill 1, blk 4	*	5935
Leon County (Buffalo)—		
Lone Star Gasoline Co. Lee 2	¶115	5797
Titus County (Talco)—		
Humble, McPeters 4 (78.26-ac)	236	4274
Limestone County—		
Cosden et al, J. J. Bower 1-A	*	1595
McLennan County—		
Russell & Thompson, Phillips 1	*	1070

*Failures; †Junked; ¶Million cu. ft. gas

Shreveport.—Gulf Pipe Line Company which several months ago reduced runs from the Texas side of Rodessa, is taking the full amount of allowable from its connections during August, retroactive to August 1, but it is reported the company will ask the railroad commission for relief by September 1 by reducing the allowable.

Allowables

[*Continued from page 44*]

sand to eighteen thousand barrels daily. As a result of this cut, Yates engineers testified that waste resulted because of higher gas/oil ratios, greater reservoir displacement and decreased lifting efficiency.

The pressure curve in East Texas dropped for the first time since Saturday and Sunday shutdowns were inagurated.

There was a decline of 3,81 barrels in the bottom-hole pressure between July 8 and August 8. The average pressure for the field on the latter date was 1121.64 pounds. Meanwhile the allowable had increased to 430,549 barrels daily indicating that pressure declined during this period to .295 pounds per million barrels of allowable oil.

A hearing on allowables for gas wells in the Sanford area was set for Wednesday, August 24. Senator Clint Small requested the hearing on behalf of Dave Rubin who owns 8 gas wells in the area. The hearing will be held at Austin.

During the course of Friday's hearing commissioners made no comment which might indicate the trend of September allowables. The absence of these comments, however, was in itself an indication that no serious changes are contemplated.

Additional stripping plants for Texas

The Texas Railroad Commission last week issued orders intended to conserve natural gas in various fields.

Camp Production Company was given a permit to construct an experimental stripping plant in the Stratton field, Nueces County. The order issued provides for processing the gas and returning the residue to the horizon from which it was produced.

A similar permit was granted to J. Wood Glass for a plant in the Agua Dulce field in Nueces County.

A permit for a plant was granted in Hutchinson County in the Texas Panhandle where gas is to be produced from one sand, processed and then used to repressure oil producing formations. This permit was granted to F. C. Henderson and E. P. Henderson and applies to wells producing sweet gas.

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Southwest Texas Fields

Alice well showing indicates probable important reserve. Mustang Island wildcat projected to go to 8000 feet. Two new fields in prospect in San Antonio district.

Corpus Christi.—Attempting to blow out from a 70-foot sand section in the Cockfield, H. H. Howell's H. J. Mosser 1, Lot 97, of the Collins Farm Lots, makes the Alice field, Jim Wells County, appear to be a major deep reserve. The test, with an elevation of 230 feet, derrick floor, found the gas horizon at 7190-7260 feet. Attempt was made to circulate by raising the drill stem, following which the hole bridged and the bit could be lowered below 7100 feet.

Production test will be made in a Frio sand reported at 4982-5002 feet, where cores indicated saturation. Another well possibly will be drilled to determine the possibilities of the lower zone. The field's regular Vicksburg sand pay at 5300 feet was hard and carried no producing qualities.

Between this well and the field, Pratt & Browning et al's Stillwell 1, NE Block 62, was coring for the 5300-foot zone.

Robert Bowles Oil Company's Ragland 2, Lot 15, in the southern portion of the field, uncovered a new producing zone in the Frio when drill-stem test at 4984-5002 feet recovered 480 feet of pipe line oil, no water and 50 pounds working pressure in 5 minutes. It was drilling ahead to the regular pay.

The field takes on the perspective of being an elongated domal type proposition with the sands showing a steep dip in all directions off the axis.

Wildcatting, especially to the deeper zones, takes on a brighter appearance with scattered locations being announced. The newest operation is The Texas Company's Mustang Island test, which will be drilled under contract by Loffland Brothers. The well, on first contract, is to go to 8000 feet, then will be carried much deeper if indications are favorable. The location is 8 miles south of the south jetty at Aransas Pass and is the first deep test to be drilled this far from the mainland in the South Texas Gulf Coast. A shallow well drilled on the island many years ago has showings of both oil and gas.

The Texas Company operation likely will require considerable engineering skill to carry equipment across the water and over the thick sands to the location. It is important, however, in that it may tend to prove the possibilities of the range of islands following the Gulf Coastal Trend being subsurface highs.

Union Producing Company had a bit of hard luck in Minnie Brown 1, deep heaving-shale well in the Agua Dulce area of Nueces County. The well heaved just short of 11,000 feet, but late in the week it is said that the hole was again cleared and the bit was going ahead.

On Bird Island prospect, Kleberg County, Pure Oil Company is below 9350 feet in State 1, Submerger tract 522.

Hidalgo County Frio discovery still testing

Mission.—Another gas-distillate field in the Frio zone was virtually assured with R. E. Harding et al continuing completion work in J. J. Lynn 1, Block 202 of the Kelly-Pharr Subdivision, Porcion 69, in Hidalgo County. The well flowed at the rate of 25 barrels of 61.5 gravity water-white distillate, some wash water and mud through 3/8-inch choke under pressures of 2025 pounds on tubing and 2050 pounds on casing. The mud volume was not decreased, indicating that it was coming from a leaking cement job, and the well was being washed again before making further tests. It had a gas/oil ratio of about 100,000 cubic feet to 1 barrel.

The test found sand at 5970-94 feet, but drilled ahead to 7214 feet, showing producing possibilities at 6660-6745 feet and 7070-7115 feet. Perforations in the latter sands, however, netted only salt water. Completion was effected through perforations at 5970-74 feet, where 12 shots were made.

Harding and associates have a block of about 13,000 acres.

Union Sulphur Company, after drilling to a record depth for the Mercedes field, Hidalgo County, landed 5½-inch casing on bottom at 9618 feet in American Rio Grande Land & Irrigation Company 11. It had several possible producing zones below the regular 7500-foot sand, all of which will be tested.

Phillips Petroleum Company's Flores 1, in the Samfordyce field, was going ahead below 7000 feet on its deep project.

New fields in prospect in Atascosa and Frio

San Antonio.—Two wildcats were attempting completion in an effort to open new oil fields in Atascosa and Frio counties. Each is on a previously-drilled prospect and are expected to be successful.

George E. Smith's San Antonio Joint Stock Land Bank 1, 115 feet from the east line and 205 feet from the southwest line of Survey No. 2, and 5 miles northeast of Pearsall, Frio County, was being finished at 3738 feet, having topped oil sand in the Navarro zone at 3722 feet. Casing was landed at 3720

SOUTH TEXAS Completions

Company Well and Location	Init. Prod. Bbls.	Depth
LAREDO DISTRICT		
Duval County—		
Cox & Hamon and Gorman-Yoakum, Cuellar 9, Hoffman	150	2865
Cuellar 10, Hoffman	150	2823
Cuellar 27, Hoffman	100	2849
Hoffman-Conway 1, Hoffman	104	2758
Hoffman-Conway 2, Hoffman	61	2911
Crighton & Moore, Martin 4, Casa Blanca	80	1168
Eagle Hill & Butler, Foster 10-B, Eagle Hill	100	1530
Gravis, Megerle 1, J. Broyles sur	•	....
Puig 4-B, N. Sweden	425	4772
Gulf Stream, Rodriquez 8-B, Seven Sisters	100	2664
Hiawatha, Miller 5, S. Sweden	50	5984
Parr 15, N. Sweden	500	4760
Houston Oil, Fitzsimmons 1, Fitzsimmons	550	4328
Magnolia, Duval City Ranch 1-83, CCSD & RGNG sur	•	....
Duval City Ranch 5 (201), J. Poitevent sur	80	1499
Duval City Ranch 6 (291), Casa Blanca	60	1203
Weil Estate 9, Hoffman	216	2792
Reynosa, Rodriquez 3-B, Seven Sisters	425	2675
Shields, Martin 3, Casa Blanca	200	1164
Southwood, Rossi 6-A, N. Sweden	350	4862
Standard of Kansas, Rossi 4, N. Sweden	450	4824
Sun, Brueggemann 1, Fitzsimmons	500	4279
McMullen County—		
Carmos, Claunch 12, S. Callihan	15	1073
Schimmel, Hagist 7, R. Mills sur	•	....
Webb County—		
Appell, Laurel Bros. 1, Oilton	•	....
Massingill & Belew, Martin-Killam, Oilton	55	1904
Morton, Laurel Bros. 1, Seal Morrison sur	¶5 & 20	2025
Zapata County—		
Bob, Richey & Curry, Martinez 1, Charco Redondo	•	....
Nash, Haynes 31-A, Comitas	20	1071
Transwestern, Trevino E-13, Escobas	15	1274
SAN ANTONIO DISTRICT		
Bastrop County—		
Marts & Beaven, Inc., Talley 1, sur 120	•	2405
Caldwell County—		
Magnolia, Moore 21, Luling	200	2148
Martell, Teas 3-C, Branyon	46	2196
Ogden, Barber & Lovell 3, North Dale	96	2691
Plaginos & Redding, Davis 2, Salt Flats	....	....
Taylor, Brown 5, Luling	34	2163
Brown 6, Luling	33	2120
Miears 3, Dale	•	2824
Guadalupe County—		
Banks Miller, Union Central 1, Davis sur	•	2166
Chiquita, Tadlock 3, Darst Creek	113	2648
Gallagher & Nute, Roberts 1, Darst sur	•	lcn.
Spiller, Allen 1, West Dunlap	•	2409
CORPUS CHRISTI DISTRICT		
Bee County—		
Aid, Hall 1, Kerr sur	•	3830
Swiger, McKinney 1, Randolph sur	•	4208
Calhoun County—		
Humble, Vandenberge 3, Heyser	475	5487
Goliad County—		
Bunte, Taylor 1, Smith sur	•	5563
Hidalgo County—		
Dean-Davis-Boiling, Guerra 1, Samfordyce	500	2872
Harding-Pantano, Woody 1, porcion 69	¶3 & 50	7214
Weekly, Guerra 3-C, Samfordyce	450	2879
Jackson County—		
Crown Central, Foust 3, Cordelle	250	2662
Jim Wells County—		
Buchanan & Blanco, Rattan 1, Alice	1000	5302
Karnes County—		
Stewart & Blacknall, Kellam 1, sec 53, S.J.&I. subd	•	3505
Live Oak County—		
Bailey, Bailey & Thorman, McDermott 1, Killeley & Henry grant	•	2105
Nueces County—		
Heep & Refugio, Rogers 2, South Clara Driscoll	400	5349
Killam, Ellick 6, Clara Driscoll	375	5471
Renway, Kenedy 3-B, Turkey Creek (perf 6882-85)	75	7005
Rutherford, McKenzie 2, Turkey Creek (perf 5388-90)	150	7050
Southern Minerals, King 10, Bentonville-King	¶5	6187
Refugio County—		
Hewitt & Dougherty, Lambert 75, Tomoconnor	1350	5910
Quintana, F.V.W. Heard 22, Tomoconnor	3000	5925
San Patricio County—		
Conservative, Moore-Young 1, McCampbell	900	7145
Humble, Henry 1, Taft Farm Lots subd	•	5950
Plymouth, Nelson 3, E. White Point	600	5676
Sparks 1, E. White Point	600	5657

•Failures; †Junked; ¶Million cu. ft. gas

feet. The well has an elevation of 600 feet, derrick floor.

This prospective field opener is 50 feet north of Thomson and Thomson's test on the same tract, which had a showing about this level, but drilled to the Edwards limestone below 5600 feet, where it developed sulphur water. That test was plugged back, but was unsuccessful in an effort to complete. Smith then took over the block and drilled a new well.

This test is on a prospect of Humble Oil & Refining Company, the company holding 20,000 acres of leases. Six miles east of the well, Humble is drilling Schley 1, a 5500-foot Edwards limestone test.

After drilling six wells on the Anchorage prospect in Atascosa County, it now appears that production will be established. Western Gulf Petroleum Corporation's A. Venagas 1, cored serpentine with good oil show at 2702-43 feet, and casing was set at 2730 feet. Plugs have been drilled and the test is being completed. It will be deepened into the zone if production is not adequate at this level.

The potential discovery well is 330 feet out of the west corner of a 28.6-acre tract in the F. de la Garza Survey and is 185 feet north of Mason Altgelt et al's test on the same tract which was junked and abandoned.

Several wells drilled on this plug, discovered through magnetometer, had up to 600 feet of serpentine.

East Duval County extensions not spectacular

San Diego.—Several minor extensions to Eastern Duval County fields featured developments during the week in the Mirando district. None, however, were of spectacular proportions.

Hiawatha Oil Gas Company's M. M. Miller 5, NE Section 23, and 4700 feet west of Sweden field production, flowed 50 barrels of crude per day through ¼-inch choke from a new sand in the Government Wells zone. The test, not making any water, showed no pressure on tubing and only 120 pounds on casing. It had been drilled to 5984 feet, plugged back, landed casing at 5033 feet and perforated at 4895-4915 feet with 30 shots.

Rowan & Hope were gun-perforating opposite Pettus sand in Cuellar Brothers 1, 660 feet north and west of the discovery well of the Tesoro pool. It will be the second producer for the field. The test drilled to 5360 feet, running a drill-stem test at 5356-60 feet in the Yegua sand, where 100 feet of salt water, a little oil, and no pressure were recovered through ⅜-inch choke, top and bottom, in 10 minutes. Casing will be perforated between 5074-81 feet.

Sun Oil Company has been having difficulty overcoming excessive gas volume in its operations in the Fitzsimmons pool of Duval County. After flowing at the rate of 115 barrels of oil per day through 9/64-inch choke after perforating at 4270-75 feet, the well went to dry gas and perforations were squeezed. Another perforation job will be attempted.

Rancho Solo shallow field in Duval County may be having a ¾-mile southeast extension in Glenn Stewart and C. H. Nye's W. R. Porters 1, NW SE N S Section 29. After drilling to the 3200-foot contract, it was plugged back to 1950 feet, casing set, and perforations will be made at 1853-70 feet.

Texas Gulf Coast

Fairbanks north outpost quits in salt water sands.

Shell swabbing Cheek wildcat after perforating.

Houston.—Fairbanks field, Harris County, continued to feature Texas Gulf Coast operations the past week. Approximately ¾ miles north of production, W. V. Bowles abandoned Galloway 3, M. McFarland Survey at 7232 feet in salt water sands. The well failed to pick up oil sands in the 6850-foot horizon and was carried to 7232 feet to test sands found in the Goodykoontz test, which was completed the previous week below 7100 feet making 20,000,000 cubic feet of gas daily. Three fourths mile east of production at Fairbanks, and 5800 feet south of the Goodykoontz well, Stanolind Oil & Gas Company's Look 1, S. Lewis Survey, appears to be a dry hole. It is drilling below 7230 feet in shale and has logged nothing but badly broken formations with odors of oil and gas. The well probably will be carried to 7500 feet.

Flank Well Flowing

On the northeast flank of Fairbanks, H. E. Williams is testing Kramer 1, G. W. Reid Survey. At last reports the well was flowing an estimated 14 barrels per hour through a 3/16-inch choke at 6854 feet. Tubing pressure was 1000 pounds and casing pressure was 1100 pounds.

Four new oil wells were completed at Fairbanks last week. Amerada Petroleum Corporation and Stanolind Oil & Gas Company were credited with completing two of the wells and Windsor Oil Company completed the other two.

Four Wildcats Fail

Four wildcats were abandoned in the Texas Gulf Coast during the past week on geophysical prospects.

In the Gulf of Mexico, off the shore of Jefferson County and in Tract 7, Humble Oil & Refining Company abandoned State B-6 at 2134 feet in anhydrite. Top of the formation was encountered at 1726 feet. The first well drilled in this area topped anhydrite and then went into salt. Humble Oil & Refining Company will probably spud State B-8 the coming week.

West of Hardin, Liberty County, where The Texas Company spent considerable money for leases and geophysical work several years ago, the company drilled Page 1, J. Hanley Survey, to 8050 feet and failed to find commercial production. Salt water sands were logged from 8020 to 8030 feet.

On a block of 14,000 acres in Polk County, Jack Frazier drilled Sol Bergman 1, A. Veisca Survey, in what is known as the Goodrich area, to 4211

Bee County test sets in oil sand

Beeville.—Pettus district had its first oil field in months in the making, with Atlantic Refining Company setting casing to test J. L. Courtney 1, 2 miles northwest of Pettus in Bee County. The test cored sand at 3658-61 feet and made 3 drill-stem tests, all of which failed. Pipe then was landed at 3655 feet. The test is 330 feet from the south line and 990 feet from the west line of a 160-acre lease out of the 471.8-acre tract, George A. Kerr Survey. The test has an elevation of 357 feet, derrick floor.

TEXAS GULF COAST

Completions

Company Well and Location	Init. Prod. Bbls.	Depth
Anahuac—		
Humble, Johnson 23	671	7130
Batson—		
J. A. Deering, Jordan 3	181	5360
Cedar Point—		
Standard and Salt Dome, State 1-94, dr to 6450 ft, pb and comp.	264	4413
Dickinson—		
Atlantic, Frederick 1	724	8132
Fairbanks—		
Amerada-Stanolind, Day 2	650	6857
Denman 2	632	6849
Mills 3	196	6857
W. V. Bowles, Galloway 3	*	7232
Windsor, Ley 4	658	6843
Ley 5	715	6840
Friendswood—		
Humble, Beamer 17	617	6045
Grey 10	622	6046
Grey 13	648	6056
Hankamer—		
Hankamer Oil Co., Stengler 2	*	3063
Hardin—		
Atlantic, Wilson 3	119	7601
Gulf, Barfield A-4	*	7686
Hastings—		
Humble, Alexander 8	615	6050
Beers F-2	602	6050
Stanolind, Ford A-20	*	6135
Paul 29	574	5835
Humble—		
John Deering, Carroll O&G Co. 5	75	2712
Orange—		
General Oil Co., State 2	36	6035
Pierce Junction—		
Hamil & Smith, Bashara 1	35	4444
South Liberty—		
Lawrence Oil Co., Van Deventer 3	*	4750
Tomball—		
Humble, Gossett 7	24	5555
Turtle Bay—		
Stanolind, Middleton 6	*	6607
Brazoria County—		
Texas Co., Jones 1, sw of Manvel, H&TB sur. No. 64	*	7641
Jefferson County—		
Humble, State B-6, in Gulf of Mexico, Tract 7	*	2134
Liberty County—		
Texas Co., Page 1, West Hardin area, J. Hanley area	*	8050
Polk County—		
Jack Frazier, S. Bergman 1, Goodrich area, J. D. Thomas sur.	*	4211

*Failures; †Junked; ¶Million cu. ft. gas

feet and then ran an electrical logging device. This survey failed to show any sands of importance so the hole was abandoned. A sand was encountered around 3856 feet, but it showed salt water.

Southwest of production at Manvel, Brazoria County, The Texas Company plugged M. W. Jones 1, H. T. & B. Survey 64, at 7641 feet in salt water sands. The well run normal with other wells in the area.

Swabbing at Cheek

Swabbing operations were in progress on Shell Petroleum Corporation's Ed. Pleasant 1, in the Cheek area, Jefferson County. The crew perforated casing from 7717 to 7720 feet with 12 holes. A drill stem test previous to swabbing showed 17 barrels of oil. Ed Pleasant 1 is the second well drilled in the area. Glenn H. McCarthy discovered the field the first of this year.

Magnolia Petroleum Company received its second producer at North Cheek field, in Jefferson County, last week when Phelan 5, northeast of the discovery well, S. Stivers Survey, came in flowing 91 barrels of distillate daily through a quarter-inch choke from Frio sands at 8310 to 8319 feet. The gas/oil ratio was high and operators will probably kill and rework the well.

Tide Water Associated Oil Company is receiving its share of trouble of completing wells on the Lackner lease at Eureka, Harris County. The first well completed in the area stuck drill pipe a number of times, and now Lackner 2, 1200 feet north of production, J. Reinerman Survey, is milling on tubing at 7760 feet. Lackner 2 topped oil sand high at 7678 feet and set 7-inch casing at 7760 feet. Casing was perforated from 7684 to 7704 feet and a test showed salt water. Then it was reperforated at 7735 feet and cement was squeezed through perforations. The same concern's Lackner 1-B, H. Reinerman Survey, north flank test was waiting on cement to set at 7710 feet after landing 5½-inch casing at that depth.

SOUTH LOUISIANA Completions

Company Well and Location	Init. Prod. Bbls.	Depth
Bayou Blue—		
Humble, Wilbert 7	*	6392
Cameron Meadows—		
Burton-Sutton, School Land 25	*	7960
Charenton—		
Pan American, Lawes Realty 10	¶½	1112
Jennings—		
L.&L. Oil Co., Houssiere Latrielle 1	145	2003
Superior, Leckelt 13	570	7612
Three Sands Oil Co., Whisenant & Tyrell 1	60	1855
Lafitte—		
Texas Co. L. L. E. Lafitte 11	1733	10106
New Iberia—		
Texas Co., Burke 2	643	5804
Gralino 4	741	6151
Valentine—		
Pan American, Community 1-A	*	8094
Ville Platte—		
Amerada, Fournier 2	672	9103
Iberia—		
Jefferson Lake Oil Co., Lake Peigneur 414, 12s-5e	*	7071
Jefferson Davis—		
Union Sulphur, Liggett 1, Fenton area, 36-7s-5w	*	8392
Terrebonne—		
Texas Co., State Coon Point 1, Caillou Bay, 22s-14e	*	4922

*Failures; †Junked; ¶Million cu. ft. gas.

South Louisiana

Cockfield oil is discovered in Bancroft gas field. New sand for Bayou Des Allemands at 9463 feet. Valentine well trying to blow out from new sand.

Lake Charles.—Bancroft gas field, Beauregard Parish, was converted into an oil field last week when Republic Production Company completed Columbia Land & Timber Company 1, Section 16-6s-13w, in lower Cockfield formation at 7393 feet flowing an estimated 500 barrels of 43 gravity oil daily through a quarter-inch choke. Tubing pressure was 1600 pounds and casing pressure was 1700 pounds. Bancroft field was discovered this year by Republic Production Company when Lutcher Moore 1, Section 10-6s-13w, came in flowing gas and distillate at 7579 feet. It was estimated that the well made 3,000,000 cubic feet of gas daily and a small amount of 63 gravity distillate. Located near the Sabine river, which is the border line of Texas and Louisiana, the field is the second in South Louisiana to produce oil from Cockfield formation, the first being at Cheneyville in Rapides Parish.

New Sand

Amerada Petroleum Corporation has opened a new producing sand at Bayou Des Allemands field, St. Charles Parish. The new sand is the second for the field and the well that discovered it is the second producer. State 4 made 119 barrels of distillate and 4,500,000 cubic feet of gas daily through a quarter-inch choke from 9463 feet. Pressure on the tubing was 3650 pounds and no pressure was reported on casing. State 4, 15s-20e, was drilled to 9914 feet and was bottomed in salt. Top of the salt was logged at 9909 feet. A short string of 6⅝-inch casing was set at 9497 feet and casing was perforated with 36 shots from 9453 to 9463 feet. State 4 is the third well to be completed in the area, the first was the discovery well, completed at 6820 feet and the second was abandoned below 9000 feet. Amerada Petroleum Corporation has two active wells now at Bayou Des Allemands.

Pan American Hits Too

Pan American Production Company continued to have trouble with Community B-2, Section 58-17s-20e, approximately 4000 feet south of production at Valentine in Lafourche Parish. The well is attempting to blow out from a new producing horizon at 9318 to 9325 feet. After setting screen, liner and a back pressure valve, the hole was swabbed down to 7500 feet and the well failed to flow. Upon cutting the back pressure valve out the well started to blow out and was shut in. Heavy drilling mud is being pumped into the hole. The 9325-foot sand is the deepest yet discovered at Valentine. Some are of the opinion that it is the regular Shoal River sand, while others believe it might be the Lake Long or Lafitte sand.

Lirette Extended

Lirette field, Terrebonne Parish, was extended 2½ miles southeast last week when Fohs Oil Company completed State Bay Baptiste 1, Section 41-19s-19e, Terrebonne Parish. This well is the second deepest producing well in South Louisiana and is also the second deepest well ever drilled in the world. State Bay Baptiste 1 was drilled to 13,409 feet and was plugged back and a number of tests were made. The completion depth was from 11,172 to 11,178 feet in Miocene formation. Casing was perforated with 15 shots and after washing, it came in flowing 53 barrels of 49.9 gravity oil daily and 2,500,000 cubic feet of gas through a 10/64-inch choke and tubing pressure was 4000 pounds.

Two new oil sands were discovered at New Iberia field, Iberia Parish, last week by The Texas Company. The company's Celeste Gralina 4, Section 25-12s-7e, came in flowing 741 barrels of 29.6 gravity pipe line oil daily through a quarter-inch choke with a tubing pressure of 875 pounds. Celeste Gralino 4 was drilled to 6181 feet and seven-inch casing was set at 6100 feet. Sand showing oil was logged from 5995 to 6177 feet. Sixty-three feet of screen was set. The same operator's P. R. Burke 2, Section 56-12s-7e, was completed in sand showing oil from 5754 to 5801 feet. Seven-inch casing was set at 5754 feet and 61 feet of screen was set. It made 643 barrels of 29 gravity oil daily through a quarter-inch choke and tubing pressure was 1200 pounds.

Thin Showing

Shell Petroleum Corporation logged a thin section of sand showing oil in Godchaux Sugars 1, La Place prospect, Section 97-11s-7e, St. John The Baptiste Parish, and was coring ahead at the end of the week. From 8411 to 8413 feet sand showing oil was encountered; from 8413 to 8418 feet there was no recovery, and from 8418 to 8423 feet sand and shale with no shows were cored. The crew attempted a drill stem test from 8413 to 8424 feet, but the testing tool slipped.

The Texas Company has abandoned State Coon Point 1, Caillou Bay prospect, 22s-14e, Terrebonne Parish, at 4970 feet in salt. Sands showed oil from 3959 to 3996 feet, from 3809 to 3817 and from 4390 to 4395 feet. State Coon Point established a new salt dome in South Louisiana when salt was logged at 4922 feet. Further exploratory drilling around the flanks of this new salt dome may lead to the discovery of oil.

South of production at Gibson, Terrebonne Parish, Shell Petroleum Corporation continues to drill below 10,238 feet in Kuntz 1, Section 40-17s-15e. Last week this extension well cored slight odors of oil and gas from 9790 to 9803 feet and from 9855 to 9870 feet.

May Get Deeper Pay

A new deeper producing sand may be discovered at Darrow dome, Ascension Parish, in Southern Driller's Incorporated's A. Berteau 1, Section 55-10s-2e. Ten feet of sand showing oil was cored from

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7363 to 7373 feet. Several broken formations were cored up the hole which had odors of oil and gas. At last reports the test was down to 7642 feet in shale.

Humble Oil & Refining Company has two wells at Darrow which went into salt last week. One of the wells is shut down and the other is still coring in salt. The company's Community B-1, Section 49-10s-2e, is bottomed at 7944 feet in salt. Several broken formations were cored in this well which contained odors of oil and gas. The same operator's Gumble 14, Section 33-10s-2e, is coring salt at 7017 feet. The deepest producing horizon at Darrow is 6995 feet.

Humble Oil & Refining Company abandoned another well at Bayou Blue, Iberville Parish, which was searching for deep pay. Wilbert 7, Section 66-9s-11e, was abandoned at 6392 feet in salt.

On the Golden Meadows prospect, Lafourche Parish, The Texas Company is setting a string of 9⅝-inch casing to protect the hole in La Terre 1, Section 1-20s-21e. The wildcat is bottomed in shale at 8898 feet. According to rumors, the well has logged sands showing oil.

Pure Oil Company again will attempt to establish production in the Lowry area, Cameron Parish. Location has been staked for Calcasieu National Bank 2, 466 feet south and 466 feet east from the northwest corner of Section 18-12s-4w.

Operations at Creole, Cameron Parish, in Gulf of Mexico, will probably be shut down for six weeks until repairs are made on the platform which was damaged by the storm the previous week. All wells have been drilled from one platform out in the Gulf of Mexico.

At Fausse Point, The Texas Company made location for State Lake Fausse Point 5, 4350 feet south and 3550 feet east from the northwest corner of Section 35-11s-8e.

On the Fenton prospect, Jefferson Davis Parish, Union Sulphur Company abandoned Liggett 1, Section 36-7s-5w, at 8392 feet in shale. Water sand was encountered from 7306 to 7316 feet. Liggett 1 topped the Discorbis at 6100 feet, Heterostegina at 6420 feet and Marginulina at 6745 feet.

The second well on the southwest side of West Hackberry field, Cameron Parish, to log oil sand is Superior Oil Company's Benson-Vincent 3, Section 30-12s-10w. The sand was topped at 6583 feet. The hole is bottomed at 6632 feet and seven-inch casing is being set for a production test. The well is considerably lower than the discovery oil well.

The Texas Company's second well at Jefferson Island field, 12s-5e, Iberia Parish, logged salt, passed through the formation, and was bottomed at 3940 feet in sandy lime at the end of the week. State Lake Peigneur 1 had salt from 3642 to 3741 feet.

23 Louisiana permits issued during week

Shreveport.—Twenty-one drilling permits were authorized last week by the Louisiana Conservation Commission of which 15 were in North Louisiana divided among the following parishes: Caddo, 7; La Salle, 1; Morehouse, 1; Sabine, 3; and Webster (Cotton Valley), 3. The 6 in South Louisiana were divided among the following parishes: Avoyelles, 1; Acadia, 2; Evangeline, 1; LaFourche, 1; and St. Mary, 1.

North Louisiana Fields

Shreveport well gets offset; another try six miles away.

Lisbon southwest edge has further evidence limit reached.

Shreveport.—Two new locations were made last week in the new Shreveport oil field, Caddo Parish, one being a west offset to the discovery basal Glen Rose lime producer of R. E. Allison.

Allison, who has a block of approximately 6000 acres, staked location for Ellerbe 2, located 531.3 feet west and 1191.6 feet south of NEc 28-18n-14w, in the center of a 40-acre tract. It is a west offset to the discovery well, Ellerbe 1, SW NW 27-18n-14w.

Six miles southeast of the discovery well, Superior Oil Corporation of Tulsa and F. W. Martin made location and began moving in materials for Andrew Querbes 1, irregular Section 37-17n-13w, located 5576 feet south and 541 feet west of SEc 8-17n-13w. These operators have a 623-acre lease around the location, just south of the Shreveport city limits.

Drilling obligations for early operations are contained in two other leases secured during the last week. A. O. Olsen in securing a 46-acre lease in Section 33-18n-14w, obligated himself to start a test within 10 days, and William C. Leisk also obligated himself to drill a 6000-foot test within 6 months on a lease in Section 26-18n-14w.

J. E. Smitherman is securing titles on a block of several hundred acres in Township 17 North, Range 13 West, south of the Shreveport city limits, for an early test. Gulf Refining Company has secured over 1000 acres in Sections 9, 20 and 21-17n-13w, on the east edge of the Shreveport city limits, for a 6000-foot test.

A great many smaller tracts are being secured in and around Shreveport's city limits.

Tide Water Associated Oil Company and Gulf Refining Company are leasing actively around the old Pine Island field, Caddo Parish, having jointly secured 1100 acres in Townships 21 and 22 north, Range 14 west. Tide Water Associated has secured over 4000 acres in Townships 20 and 21 north, Range 14 west, and Gulf has secured approximately 1000 acres alone in this general area.

In Sabine Parish, John D. O'Mara and associates have secured 1500 acres around Section 24-10n-12w, two miles north of Pleasant Hill, for a 3300-foot test to start by November 1.

Ten miles northwest of Farmerville, Union Parish, Atlantic Refining Company has leased over 1000 acres around Section 15-22n-1w, and is negotiating for a similar amount of acreage nearby. Kerrlyn Oil Company has a seismograph unit working in Township 23 north, Range 2 east.

In Webster Parish, five miles northeast of Elmore, Oliver H. Shepherd has leased approximately 1000 acres around Section 19-19n-10w, W. C. Feazel has been taking some scattered leases in Section 32-18n-9w, and Section 5-17n-9w. Tide Water Associated Oil Company has a seismograph unit working in the same parish in Township 21 north, Range 11 west.

Magnolia Petroleum Company last week continued to ream down to 6025 feet at Pardee Company 1, NE NW NE 17-23n-11w, Webster Parish, a geophysical prospect, which logged 40 feet of saturation in the Pettit (basal Glen Rose lime), which was topped at 5920 feet; elevation is 203 feet.

DeSoto Oil & Gas Company (R. O. Roy) was running 10¾-inch casing in Mrs. B. A. Fleming 1, NW NW 18-16n-9w, Bienville Parish, which had a good showing in basal Glen Rose. Total depth is 5303 feet.

Lisbon Defined

The southwest limits of the Lisbon field were further defined last week when Sklar Oil Company's Lowery 1, NE SW 14-20n-5w, failed to pick up saturation in basal Glen Rose lime and shut down at 5340 feet. This was to be expected, as W. H. North's Lowery 1, NE NW 14-20n-5w, also failed to pick up saturation, although it logged 9 feet of porosity in 3 sections of this horizon.

The north and northwest flanks of the Cotton Valley field came into prominence last week with two tests reaching critical depths in the lower Marine. North American Consolidated Oil Company's W. M. Burrow 1, C

NORTH LOUISIANA Completions

Company Well and Location	Init. Prod. Bbls.	Depth
Bossier (Bellvue)—		
Premier Inv. Co., Connell 3, 15-19-11	20	375
Caddo (Pine Island)—		
Carney et al, Hart 1, 21-21-16	*	1038
W. D. Chew, Stiles 3, 33-21-16	50	1878
Driscoll et al, Pender 4, 11-20-15	50	2201
Magnolia, Dillon 27, 24-21-15	25	1625
Midfield Oil Co., Muslow 5, 6-20-15	40	1570
J. F. Mitchell, Muslow 2, 31-21-15	15	1649
Nat Wiseman, Stiles 3, 27-21-16	*	1705
Claiborne (Lisbon)—		
J. H. Henry, Tippitt 1, 33-21-4	*	5274
Olson Drlg. Co., Kennedy 1, 26-21-5	250	5205
Texas-Canadian Oil Co., Lowery B-1, 14-20-5	1440	5396
Morehouse (Monroe)—		
Union Prod. Co., Crossett 57, 57-21n-5e	¶10	2254
Sabine (Zwolle)—		
Hunter Co., La. Long Leaf A-1, 19-7-12	*	3015
Sklar & Sugar, Procella 1, 18-7-12	*	2908
Smiddy & Watson, Sabine 1, 12-7-13	75	2580
Union (Monroe)—		
Inabnet & Pipes, Peek 2, 8-20n-4e	¶4	2144

*Failures; †Junked; ¶Million cu. ft. gas.

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NE NW 21-21n-10w, northwest outpost, was coring and drilling ahead after logging top of the lower Marine black shale at 8085 feet; elevation is 240 feet. On the north edge of production, Ohio Oil Company's R. R. Cox 4, Account 2, C NE SE 15-21n-10w, was arranging to make production test with total depth of 8602 feet. With elevation of 221 feet, this test topped "C" sand at 8407 feet, topped "D" sand at 8456 feet, and in a core from 8550 to 8597 feet in the "E" or Bodcaw sand logged a small amount of lime that carried saturation.

East of production at Cotton Valley, Mid-States Oil Corporation, which owns one of the crude oil producers on the south flank of the field, leased 200 acres from T. K. Giddens of Shreveport.

Arkansas Fields

Second Village test responds with large salt water flow. Call conservation hearing at El Dorado for August 22.

El Dorado, Ark.—Further proof that Standard Oil Company of Louisiana's discovery well at Village, Columbia County, Arkansas, was a southwest edge well, was given last week when the second test in that area showed salt water. This test is Tina Crumpler 1, C SW NW 15-17-19, which tested a large amount of salt water and a little oil when casing was perforated at 7400-7408 feet. Seven-inch casing had been set at 7485 feet, with total depth of 7500 feet.

Previously, Fohs Oil Company's W. P. Phillips 1, NW NW SW 15-17-19, had shown oil and salt water when tested. It is a southwest offset to the discovery well, while Tina Crumpler 1 is a west offset. Fohs has plugged back to 7286 feet and drilled out cement to 7380 feet, perforating casing from 7370 to 7378 feet. Drill-stem test was then made through ¼-inch chokes at top and bottom and the well flowed 35 barrels of oil per hour for 4 hours with no showing of salt water, and will be completed at this level.

Standard Oil Company of Louisiana is running cutting tools to cut out tubing at circulating jars, stuck at the bottom of upper perforations which had been made at 7474 feet. On the first production test at 7400-08 feet the well flowed 50 barrels hourly through 3/16-inch tubing choke with casing pressure 1500 pounds and tubing 725 pounds, 65 percent of the yield being salt water.

Petroleum Finance Corporation's (Leon Russ et al) Alice Baker 1, C SW NW 13-17-20, Columbia County, at Magnolia, is drilling below 5510 feet after logging top of the James sand at 3750 feet (elevation 359), which is 38 feet higher than the discovery well of the field in Section 14-17-20. In the same area, Atlantic Refining Company's Harrington 1, C SW NW 14-17-20, was unlodging hung drill pipe with total depth of 5820 feet, after logging James sand at 3802 feet, with elevation of 377 feet.

Joe Modisett was coring Permian lime below 6115 feet in Frost Lumber Company 2 (Union Sawmill fee), NE NE 8-18-12, Union County, near Strong, a geophysical prospect.

Samuel S. Alexander of Fort Worth made location on a 15,000-acre block for a deep test, Smythe 1, C NE NE 7-11-14, Calhoun County, 6 miles northeast of Beardon, and has let contract to E. G. Bradham of El Dorado.

In Columbia County, J. E. Childers, who assembled a 3000-acre block around Section 16-18-19, has assigned it to Tide Water Associated Oil Company, which plans to drill in Section 15-18-19.

ARKANSAS Completions

Company Well and Location	Init. Prod. Bbls.	Depth
Miller (Wildcat)—		
Esterbrook et al, Sherman 1, 29-19-28	*	6330
Nevada (Troy)—		
B. E. Wallace, Haynie 2, 5-14-20..	50	1214
Union (Schuler)—		
Atlantic, Rodgers 1, 16-18-17.....	1440	7623
Lion, Marcus 3, 18-18-17.....	1560	7587
Union (Urbana)—		
W. D. Wingfield, Kidd 2, 15-18-13	*	2300

*Failures; †Junked; ¶Million cu. ft. gas

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In Little River County, 3 miles north of Ashdown, Barbee & Patterson of Oklahoma City assembled 7500 acres for a 3500-foot test in Section 18-12-29.

Amerada Petroleum Corporation has completed a seismograph survey of the Vick area, Bradley County, and is making a check of ownerships in the area. In Columbia County, north of McNeil, in Township 15, Range 20, Atlantic Refining Company has a seismograph unit working, while in the same county, Phillips Petroleum Company has a seismograph unit in Township 18, Range 19, and Standard Oil Company of Louisiana has a similar unit in Township 15, Range 22. Barnsdall Oil Corporation has a seismograph working near Waterloo, Nevada County, in Township 14, Range 20.

On a 5000-acre block 6 miles southeast of El Dorado, Union County, Grimes Brothers have made tentative location for a 6500-foot test in Section 6-18-14. Fohs Oil Company owns an interest in the block. In the same county centering around Section 5-18-18, Standard Oil Company of Louisiana has assembled a 3500-acre block.

El Dorado, Ark.—The Arkansas Board of Conservation has called a hearing at El Dorado at 10 a.m. Monday, August 22, to determine whether or not there is any waste of crude oil taking place in the state or is reasonably imminent. The board will also hear evidence to determine the daily amount of crude and natural gas that may be produced without waste in the following fields: Buckner, Magnolia-Village, South Miller County (Rodessa), and the Jones sand and Reynolds lime, Schuler.

El Dorado, Ark.—Three drilling permits were authorized last week by the Arkansas Board of Conservation, all three being in Union County, as follows: Phillips Petroleum Company's H. P. Sewell 1, 330 feet north and west SEc Lot 4, SW 7-18-17; J. R. Lockhart's W. N. Raulston 2, 340 feet south and west NEc NW SE 12-17-14; and Atlantic Refining Company's B. M. Dumas 2, 990 feet south and 330 feet west NEc NE NW 21-18-17.

More leasing reported in Southeastern area

Shreveport, La.—While Mississippi continues to see a great deal of wildcat leasing, Alabama, Georgia and Florida in the last fortnight have also seen the assembly of several large blocks for geophysical exploration.

In Alabama, northeast of Mobile, Union Producing Company has secured a free geophysical option on 325,000 acres of land in Townships 1, 2, 3 and 4 South, Ranges 1, 2, 3, 4 and 5 East. The company has 18 months in which to select what acreage, if any, it desires, but to validate leases, if taken, a 7000-foot test must be drilled.

In Clark and Washington counties, Gulf Refining Company has completed assembly of an 18,000-acre block around Section 15-4n-1e, and Sun Oil Company has leased about 500 acres in the same vicinity.

In Florida, in Baker, Duval, Nassau and Union counties, Kenneth Nix and associates of Lake City, Florida, have secured a free geophysical option on approximately 175,000 acres, principally from three turpentine companies.

In Appling and Jeff Davis counties in Georgia, Kingwood Oil Company of Effingham, Illinois, headed by J. T. King, has secured a free geophysical option on 250,000 acres, with two years to make selection.

In south Mississippi, in Harrison and Stone counties, Humble Oil & Refining Company has filed an application with the state department of education to lease ten sixteenth sections of land, comprising 6400 acres, all sixteenth sections in Mississippi being allocated to the departments of education and the state.

In Sunflower County, in the Mississippi delta, 5 miles south of Indianola, Ohio Oil Company has completed title work on 20,000-acre block it assembled several months ago. In Jackson County, which borders the Alabama line, Humble Oil & Refining Company has leased over 3000 acres in scattered tracts in Townships 4, 5, 6 and 7 South, Ranges 6, 7 and 8 West, bordering both sides of the Pascagoula River, which empties into the Gulf of Mexico.

In Sharkey County, also in the Mississippi delta, a few miles south of the town of Rolling Fork, J. B. Hammond has assembled a 15,000-acre block for an early test in Township 12, Range 7.

Fred E. Courson and associates have checked with seismograph a block of 20,000 acres in Simpson and Copiah counties, 18 miles northeast of Hazelhurst, the block being in Township 10 North, Range 21.

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Eastern States

Western Henderson County, Kentucky, well drowned out.

Deep test in Indiana slowed by flint-like formation.

Pittsburgh.—In western Henderson County, Kentucky, Sun Oil Company and Kentucky Natural Gas Corporation's Trigg 1 encountered an encouraging oil show in the McClosky which was immediately drowned out by salt water. The wildcat, two miles northwest of Corydon, was bottomed at 2655 feet, of which 50 feet was McClosky sand. The well, being drilled under contract by Miller & Shiarella with cable tools, is to be deepened. Nearest production is 3 miles south where a shallow well on the Proctor lease in Union County has been producing 5 barrels of oil daily for 13 years.

Principal activity in the Birk City field, opened in Henderson County in April by Hoozier Drilling Company's C. T. Blackwell 1, first test to obtain McClosky sand production outside of Illinois, has shifted across the Greene River to Daviess County, where 12 rigs were active last week. Thirty oil wells have been completed in the 4-month-old field.

Carter Oil Company's Hagan 1 was the first Daviess County well of the Birk City field to find the McClosky dry. It was being deepened last week. On the Henderson County side, Thompson Drilling Company was moving the rig from the B. Gilmore tract to A. Hayes 1, which had been abandoned at 2135 feet. It will be deepened.

EASTERN FIELDS
Completions

OHIO

Company Well and Location	Init. Prod. Bbls.	Depth
Fairfield County—		
City Nat. Gas Works, Shouk 1	*	2248
Knox County—		
H. E. Perkins, Horn 1	¶.75	2637
Ohio F. G. Co., Banbury 1	*	2975
Lawrence County—		
Pearson & Ray, Stout 1	¶.26	2810
Licking County—		
Blue Rock Oil Co., Moran 1	2	2935
Lorain County—		
Ohio F. G. Co., Lehman 1	*	2547
Medina County—		
Preston Oil Co., Parent 28	65	400
Morgan County—		
Penn Contracting Co., Love 1	¶	625
Noble County—		
Keith et al, Wickens 4	15	1215
McKee Bros., Ralph 1	*	1427
Washington County—		
Swigle, C. D. Palmer 39	1	604
Otto Heldman, Kitts 1	¶	1225

KENTUCKY

Daviess County—		
Jess Ashby, Sapp 1	300	1925
Major Oil Co., Harrington 1	200	1902
Schaffer et al, Bristow 1	*	1420
Lee County—		
South Penn Oil Co., Flahaven 110	8	712
Fraley et al, Flahaven 3	5	688
McLean County—		
J. C. Miller, Foley 13	40	761
Henderson County—		
Aetna Oil Service Corp., Pitts 1	200	1890
Snowden & McSweeney, Dempewolf 3	300	....
Carter, Boswell 4	120	....
Hupp et al, Boswell 2	*	....
Magoffin County—		
Brand, Tackett 1	5	....
Ohio County—		
Kentucky Nat. Gas Co., Beatty 1	¶1.00	....
Dehart et al, Clark Hrs. 4	*	....
Powell County—		
South Penn Oil Co., McCoy 24	4	....
Townsend et al, Mullins 1	5	....
Webster County—		
Browning et al, Ramsey 6	*	3217

WEST VIRGINIA

Boone County —		
Columbian Carbon Co., Wood 3	¶.06	3950
Clay County—		
York, Preston et al, Croikshanks 1	¶.02	1975
Gilmer County—		
Fred Wilson, Campbell 2	¶1.50	1643
Pittsburgh & W. Va. Gas Co., Simmons 7668	¶ .60	1745
Kanawha County—		
Columbian Carbon Co., Johnson & Gibson 1	¶23.00	4878
United F. G. Co., Fisher 4793	¶16.80	5193
South Penn., Beane & Newhouse 1	¶15.00	4780
Lincoln County—		
A. F. Morris, Lovejoy 1	¶ .32	3990
Monongalia County—		
Philadelphia Oil Co., Tennant Hrs. 1	3	3256
Ritchie County—		
McBurney et al, Nutter 8	2	1641
Roane County—		
Hope Nat. Gas Co., Vandevender 7810	¶.25	1784
Wetzel County—		
Burgess & Wasmuth, Singwald 1	¶ .50	580
Wirt County—		
W. C. Patterson, Pierson 1	1	520
Wood County—		
Shuman & Lowther, Hundershot 1	*	2286

Company, Well and Location	Init. Prod. Bbls.	Depth

INDIANA

Harrison County—		
Indiana Utilities Corp., Reising 2	*	881
F. L. Damron, Federal Land Bank 1	*	250
Federal Land Bank 2	*	125
Jasper County—		
B. & B. Oil Co., Nelson 1	*	128
Perry County—		
Chas. E. Dice, Dixon 6	*	380
Sullivan County—		
A. O. Thayer, Snyder 1	*	815
Vigo County—		
Carter, Wilson 1	100	2165

PENNSYLVANIA

Allegheny County—		
T. W. Phillips G&O Co., Grimm 2	*	4300
Butler County—		
Reiber & McKnight, Reiber 1	5	1700
Washington County—		
Fawcett et al, Bronder 1	75	3100
Bradford District		
Grant & Mohan, Moody	4	....
J. W. Snyder, Booth	1	....
J. S. Brown, Bell	1	....
Forest Oil Corp., 2 wells	2	....
Niagara Oil Corp., 7 wells	7	....
Bradford Transit Co., 11 wells	11	....
Bradford: Water (Pressure) Wells		
Victory Oil Co., Wright	...	....
D. E. Quinlan Estate, Fee	...	....
Forest Oil Corp.	...	....
Niagara Oil Corp.	...	....
Butler-Armstrong District		
McCandless & Co., B. J. Rennison	*	....
Frederick & Co., William Eichenlaub	1	....
Middle District		
F. H. & Ed. P. Neely et al, Big Tank Oil Co.	1	....
G. H. Klingler et al, L. E. Gates	1	....
Wasson C. Fleming, Lot 4791	*	....
Bue C. Kerr, Sloan	1	....
New York-Pennsylvania: Gas Field		
North Branch Co., C. D. Ackley	¶	....

*Failures; †Junked; ¶Million cu. ft. gas.

In Webster County, Kentucky, Iley B. Browning et al's J. R. Ramsey 6, deep test just south of Sebree Springs, filled with salt water and was abandoned. Bottom of the hole, which was started last October 18 and shut down for the winter, was at 3217 feet.

Indiana Deep Test Slowed

A flint-like formation in the Devonian is slowing Carter Oil Company's C. Graulich 1, Section 4-7s-14w, Black Township, Posey County, being closely watched as the deepest test yet to be drilled in Indiana. Bottom is at 4931 feet, slightly more than 100 feet having been made in the past week. Sun Oil Company's W. W. Gray, Section 29-8s-14w, Point Township, Posey County, resumed drilling following considerable coring at the 2700-foot level.

Greensboro Gas Company's J. R. Thompson 1, one of several scattered Pennsylvania deep tests, had a flow of 10,000 cubic feet of gas following a shot of 135 quarts of nitro-glycerine. The test is near the Summit Hotel, Wharton Township, Fayette County, and is bottomed at 8150 feet.

Peoples Natural Gas Company was preparing to abandon John Marshall 1, wildcat in Penn Township, Westmoreland County, Pennsylvania, after a shot of 60 quarts of nitroglycerine between 7642-68 feet failed to make it a gasser. The Oriskany was topped at 7647 feet and the test bottomed at 7777 feet. While a drill-stem test showed some gas at 7676 feet, it did not last. The wildcat also encountered some gas in the higher Hundred-Foot and Murrysville formations. It is one of four tests drilled with rotary tools in lower Eastern fields.

New York-Pennsylvania

In the New York-Pennsylvania deep sand gas area, Wasson et al's E. S. Collins 1, wildcat in Howe Township, Forest County, Pennsylvania, topped the Onondaga limestone at 5120 feet and at last report was drilling at 5142 feet. This test, spudded in June, has made rapid progress and, with the exception of a little caving in the Marcellus shales, has encountered no trouble. G. L. Cabot, Incorporated's Cora Cook 1, Woodhull Township, Steuben County, on the New York side, found the Oriskany dry between 4421 and 4444 feet and was abandoned at 4445 feet.

Completed operations dropped in all sections of the Eastern States area expect West Virginia last week, the net drop being 5 wells. West Virginia gained from 10 to 14, the last week's lot including 3 oil wells averaging 2 barrels each, 10 gas wells and 1 dry hole. Ohio dropped 6 to 12, which were comprised of 4 oil wells averaging 21 barrels initial daily production each, 4 gas wells and 4 dry holes. In Kentucky, completed wells dropped from 18 to 16, of which 11 were oil wells with an average daily initial production of 108 barrels, 1 gas well and 4 dry holes. Pennsylvania dropped 1 to 3, which included two oil wells averaging 40 barrels initial daily production and 1 dry hole.

Helium, although having less lifting power than hydrogen, finds is chief value for lighter-than-air craft in the fact that it is an inactive chemical. It neither burns, explodes, nor combines with any other known chemical or chemical compound.

Illinois Developments

Biggest week of new starts in Basin development history. Centralia northwest extension 500 barrels in 12 hours. Washington County well makes 100 barrels daily.

Olney, Ill.—Important and highly successful completions extending the new Lake Centralia field of Marion County and completion of a Washington County pool opener highlighted Illinois oil activity last week—a week that was marked by 79 new operations. More new starts were registered last week than in any previous week in the current boom.

I. D. Lain's A. Dempsey 1, Section 31-2n-2e, found the Benoist 75 feet lower than The Texas Company's Tate discovery, at 1751 feet, and was completed at 1775 feet. Extending the field 1 mile northwest, it flowed 500 barrels the first 12 hours. Derrick has been erected for A. Dempsey 2 and locations made for two other tests to be drilled to the Benoist on the 40-acre tract.

Eddie Self's H. F. McRoberts 1, Section 32-2n-2e, Salem Township, indicated a ¾-mile north extension when it removed a saturated Benoist sand core. The sand was topped at 1729 feet, this well also running low and indicating the discovery to be on or near the top of the structure. Mammoth Refining Company's Bachman 1, Section 9-1n-2e, Raccoon Township, which furnished a 2-mile easterly extension a week ago, set pipe at 1857 feet, 160 feet lower than Tate 1, and installed pump last week. Now shut in for marketing facilities, it indicated a 100-barrel-a-day flowing production a week ago.

Conray, Baldwin et al's West Nation School 1, Section 33-2n-2e, ¾-mile east of Self's McRoberts outpost, will be closely watched this week. It was drilling at 573 feet at last report. Six miles northwest of the Tate discovery, Boyce et al's Foster 1, Section 10-2n-1e, ¾-mile northwest of Odin, was drilling at 1343 feet. If successfully completed, the wildcat will open thousands of acres northwest of the Lake Centralia field.

The Texas Company is moving production from its discovery and seven additional completed wells through its new 4-inch pipe line to Sandoval, from which point it is moved by the Illinois Pipe Line Company's system to The Texas Company's refinery at Lawrenceville. Nine more of The Texas Company wells were at various stages in the Lake Centralia pool last week: M. Williams 3, Section 32-2n-2e, drilling at 1448 feet; M. Williams 4, Section 32-2n-2e, waiting on oil string cement, bottom at 1695 feet; M. Williams 5, Section 32-2n-2e, drilling at 900 feet; E. Richardson 1, Section 5-1n-2e, waiting on oil string cement, bottom at 1728 feet; Cannul 2, Section 3-2n-2e, drilling at 1577 feet; E. Luttrell 1, Section 16-1n-2e, spudding; R. Craig 1, Section 9-1n-2e, rigging up, and Stonecipher 1, rigging up.

Washington Well Pumping 100 Barrels

In Washington County, Thompson Drilling Company's J. Musial 1, Section 19-3s-1w, DuBois Township, 28 miles south of Centralia, installed a pump and started at 100 barrels a day. The pool opener was the first successful completion to be made in that county. Production is from the Stein sand, topped at 1235 feet, and the hole is bottomed at 1262 feet. While the well will probably settle to 50 barrels daily production shortly, low recovery cost is expected to attract considerable activity to the region. Several major companies have large holdings in the area, and considerable acreage is scattered among independents. History of Stein and Cypress sand production in the Basin shows 20 to 30 years longevity, many wells in the old fields still producing 15 barrels a day. Thompson Drilling Company will drill E. W. Rosnowski 1, ⅜-mile northeast of the discovery.

Two other tests were started in

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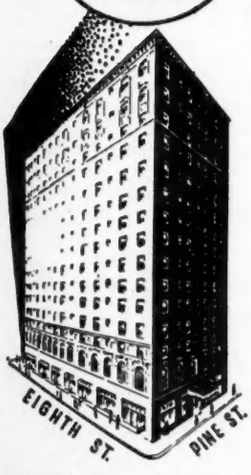

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ILLINOIS
Completions

Company Well and Location	Init. Prod. Bbls.	Depth
Bond County—		
Fite et al, Barron 1	*	1870
Champaign County —		
Nedra O&G Co., Wilson 1	¶.10	465
Clark County—		
Black Gold, Inc. (Firman Equipment Co.), Briscoe 1	15	545
Lee Werner, Echard 1	*	400
Clay County—		
Pure, Bates 1	797	3027
C. R. Bunn 1B	677	3050
Daisy Bunn 2A	692	3046
N. V. Bunn 2	227	3060
Clinton County—		
Adams O&G Co., Buehler 2	64	1386
Coe 2	70	1367
Copple 1	211	1374
Klein 1	46	1379
Rothmeyer 4	70	1373
Adams O&G Co. and Shell, Felton-Lippert 1	54	1363
Gulf, Buehler 13s	100	1405
Shell, Criley 4	105	1215
Hanseman 1	66	1350
American Seismograph, Harvey 1	30	1380
Bailey & Lucas, Kuhn 1	300	1365
Fritzie O&G Co., Hesser 1	250	1386
Harris et al, Ward 1	252	1387
Kimberlin, Jules 1	75	1380
Fairhope Oil Co. (McQueen), Hastunberg 1	250	1386
Morris & Solomon, Fletcher 1	*	1394
Noble Drilling Co., Buehler 1	40	1325
Ray et al, Centralia B & L 1	250	1384
Roberts Bros., Sissiom 1	50	1391
E. N. Smith, Eldier 1	105	1380
Smith & Roberts, Touve 1	85	1376
Vickers et al, Fee 1	35	1389
R. A. Wilson et al, Goesling 1	*	1370
Robben Oil Co., Robben 4	65	1005
Crawford County—		
Darnell et al, Boyd 1	*	1030
Dinsmoor Oil Co., Wilkins 16	1	1000
M. Wilkins 17	1	994
Effingham County—		
Kingwood & Baker, Stroble 1	*	2404
Fayette County—		
Carter Oil Co., Brauer 2	195	1503
Dove 3	126	1533
Holley 1	45	1565
Logsdon 4	90	1507
Watson 1	355	1594
Wood 1	103	1510
Wood 2	16	1544
Crump, Ritchie & Payne, Heinz 1	*	1574
Minerva Oil Co., Tish 2	250	1591
Sharp & Divers, Sealock 1	*	1942
Sol Simon et al, Robinson 1	*	1665
Trares et al, Salmons 1	*	1500
Wheless & Whisenant, A. Mueller 1	*	1546
Iroquois County—		
Whittet et al, Dooley 1	*	1096
Jefferson County—		
Carter Oil Co., Ray 1	133	1956
Case, Hanna et al, Clarida & Gambill 1	*	2010
Dee & Foltz (Kapschull et al), J. Hamilton 1	*	2911
Nollem O&G Co., Kelley 1	12	3003
Lawrence County—		
Bolton et al, Beouf 2	25	1980
Cannon et al, Garvey 1	8	1831
Hastings et al, Christiansen 2	10	1822
Kesl et al, Gray 1	¶2.65	1061
Kentucky Nat. Gas Corp., Combs 1	¶.30	844
Macoupin County—		
Cross et al, Hall 1	*	448
Marion County—		
Bell O&G Co., Home B & L 1	143	1385
Centralia Coal Co., Fee 1	55	1388
Cole & Simmel, Grode 1	168	1385
Cypress O&G Co., Fiddus 1	80	1388
Sanders 1	60	1385
Stonecipher 1	60	1380
J. P. Ostrom, Tate 1	135	1377
John Pugh Drilling Co., Cunningham 1	20	1387
J. D. Reynolds, Holcombe 1	100	1389
Rising et al, Smith 1	75	1380
Summers & Egan, Lancaster 1	60	1673
Texas Co., Canull 1	390	1734
H. Corbin 1	1074	1707
Morgan County—		
Judd & Sons, Mahon (Green) 1	*	440
Richland County—		
Pure, Ashmore 1	319	3120
Ohio, Schilling 4	167	3045
Texas Co., Zirkle 2	*	3222
Shelby County—		
Milan et al, Kull 1	*	1951
Wabash County—		
J. D. Toomey Est., Courter 18	30	1555
Joe Young, Barney & Whiteside 1	*	1554
Mac Leighty, Higgins 1	*	1628
Adams Corners Oil Co., Holson & Dorney 9	5	1550
Wayne County —		
Pure, Billington 1	*	3158
C. B. Clay 3	283	3122
S. S. Gill 4	85	3039
Mac Watkins 1	*	3147
Duncan Oil Co., Riggs 3	*	3084
H. H. Weinert, Inc., Twist 1	400	3230

*Failures; †Junked; ¶Million cu. ft. gas.

Washington County last week: Scott Townsend's L. Kaiser 1, Section 6-3s-2w, Bolo Township, 3½ miles south of Nashville, and C. E. Lange et al's R. Paul 1, Section 29-3s-4w, Lively Grove Township.

Two important tests near the Centralia pool proper are holding attention; Gill & Crosby's Smithey 1, Section 6, Grand Prairie Township, 3 miles south of the city, was cleaning and testing the Petro sand. The well had been drilled to the Benoist, then plugged back to the Stein and, after electrical test indicated sufficient saturation in the Petro, was plugged to that horizon at 1051 feet. The Petro is a 20-year producer in the old Wamac field. An offset to the east, Gill & Crosby's E. Broughal 1 was coring and testing at 1600 feet.

While town-lot drilling in Centralia has not been completed, interest in this section lagged the past two weeks in favor of important nearby developments. Only one application for a drilling permit was presented to the Centralia city council last week, and it was temporarily denied. In the south and southwest part of the city, however, there are about 25 rigs running. Schmisseur's Beacham 1, Block 2, Lot 23, at 1200 S. Beacham Street, farthest southwest test in Centralia, held major interest last week. It was bailing at 1375 feet.

Small westerly extensions were made to the eastern Fayette County field by Ray Brown & A. J. Hausmann's R. Hopper 1, Section 12-7n-2e, Sefton Township, and C. C. Canary's E. Sefton 1. Both tests cored 20 feet of good Stein sand saturation and will be completed in that formation. A test that is expected to prove the southern limitations of the field, frequently referred to as the St. Elmo field, was staked by McDavitt & Youngblood on the W. A. Mills farm, Section 10-6n-3e. It will be the first test in Wheatland Township. Carter Oil Company, major operator in the field, completed 6 producers and no dry holes in the field last week.

Following an extensive leasing campaign of town property, the St. Elmo city council last week passed an ordinance restricting drilling within the city limits to one well to a city block or a parcel of land equal to a city block. Operators are required to obtain a permit for each well, and storage tanks of a capacity in excess of 500 barrels each are prohibited.

Farthest south drilling operation in the Illinois basin, Catto Elzie's Bonar 1, Section 30-11s-3e, 12 miles north and east of Vernon, Johnson County, and 30 miles north of the Ohio River and the Kentucky boundary, was spudded last week and drilling below 145 feet at last report.

Blalack & Gray's Dr. G. N. Welch 2, Section 2, Centralia Township, Marion County, was spudded last week. The test is a half-mile north of a test drilled to the McClosky early this month and abandoned as dry. Other important wildcats included Adams Oil & Gas Company's Old Ben Coal Corporation 1, Section 19-5s-2e, Franklin County, drilling at 463 feet, and Bur-Kan Petroleum Company's wildcat in Section 2-7n-10e, Jasper County, drilling below surface pipe.

Salt water developed in the McClosky sand after an acid treatment at Leach Brothers' A. D. Lee 1, Section 11-1s-10e, first test to obtain an oil show in Edwards County. The well is being deepened to the St. Louis lime.

In Jasper County, Continental Oil Company's W. C. Eveland 1, Section 33-7n-9e, was coring at 3350 feet. Group Oil Corporation's M. Buss 1, Section 13-2s-6w, Fayetteville Township, St. Clair County, 1 mile southwest of St. Libory, was plugged last week at 1014 feet after sulphur water was encountered. It was the first well to be drilled in that vicinity.

Illinois bulletin

Urbana, Ill.—The State Geological Survey has completed publication of its Bulletin No. 31, covering "Oil & Gas Development in Illinois in 1937," prepared by Dr. A. H. Bell, head of the oil and gas division.

Included in the bulletin, which can be secured by addressing the survey, is tabulated data on 137 important wildcat wells drilled during the year, giving their locations, total depth, lowest formations reached, company ownership, initial oil and gas production, and drilling results. The bulletin reports 287 producing wells drilling during the year, increasing daily production from 12,000 barrels in January to 37,000 barrels in December. Individual wells in the basin area were producing slightly more than 100 barrels average each day.

North Dakota's deepest is drilling below 10,213 feet

Ray, N. D.—Nels Kamp 1, wildcat being drilled by The California Company, was drilling below 10,213 feet last week, a new depth record for the state. First deep test to be undertaken in North Dakota, it is on Section 3-154n-96w, Williams County.

Officials of the company at Denver last week denied rumors that saturation had been encountered that indicated a commercial well, but declared that the well would be drilled deeper.

Meanwhile, announcements regarding two other blocks of acreage held by The California Company are being awaited by those watching North Dakota activity. A drilling commitment for September 1 is contained in the lease on a 5000-acre block of state lands in McKenzie County, but the company has applied for a 30-day extension. The lease on a second block, embracing 1400 acres of Missouri River bottom lands, islands and bars, also held by The California Company, calls for drilling to start by November 13.

Oil company drivers are safer than average

Operators of motor vehicles owned by oil companies had 65 percent fewer accidents last year per mile traveled than did the average operators of commercial vehicles, the department of accident prevention of the American Petroleum Institute reports. The motor vehicle accident record of the industry during 1937 reveals 10.5 percent fewer accidents than in the preceding year and represents the best achievement of the past five years. This decline in motor accidents was accomplished despite the nation-wide increase in automotive accidents reported during the same year by the National Safety Council.

California Fields

Santa Barbara County producer believed important.

Ventura Avenue north extension test good producer.

Los Angeles.—Completely upsetting the geology on which oil companies have been working for 25 years in Santa Barbara County, Standard Oil Company of California this week is credited with making a new major oil discovery. Los Flores 1, situated on a 4600-acre block 9 miles southeast of Santa Maria, is reported capable of yielding 500 barrels of 14 gravity oil per day from 6400 feet, with more than 1000 feet of oil formation open. When the well first swabbed in, it was cutting 52 percent water, and after being permitted to pump continuously it cleaned up. Because of its surprising performance it is thought to be producing from the Sisquoc zone, although previously field scouts were of the firm opinion that the oil was coming from the Monterey. The conclusion now is that the Monterey shale structure lies underneath most of the territory between Bicknell and Gato Ridge—some 6 miles. If this is true, petroleum engineers believe the discovery will be of greater extent than that of the Santa Maria Valley and possibly surpass in importance any known field in the coastal region.

In the Ventura Avenue field, General Petroleum Corporation, during a formation test, allowed Bernard 18 to produce at the rate of 1400 barrels of 28.6-degree gravity oil per day from approximately 7760 feet.

Described as a deep test extension on the north side of this field, Bernard 18 was mudded off after staging its surprising performance and is being deepened to take in more of the productive zone. It produced from only 6 feet of formation, and the general belief is that better production will be obtained.

Seaboard Oil Corporation and Holly Development Company are linked in a wildcat test 2 miles north of the Ventura Avenue field. This combination is searching for the Vaqueros zone, productive at Elwood, on a 1000-acre block of the Riva Rancho. Situated on Sulphur Mountain, their Macrate 1 was alternately coring and drilling below 4780 feet, far below the depth where the Vaqueros was looked for. It is slated to continue until a change in formation is found.

Holly Development Company also has entered the Coalinga Nose play with the reported acquisition of a 40-acre lease in the central portion of the newly opened productive area. Situated in Section 12-20-15, Holly's piece is a diagonal offset to Gatchell 2, brought in as a high gravity oil producer by the Petroleum Securities-Seaboard Oil-Honolulu Oil combination. Four wells are being drilled in the section where Holly Development took over its new lease, these being projects of Universal Consolidated, Petroleum Securities, The Texas Company and Tide Water Associated. Superior's Hight 1, Section 8-20-15, east of Gatchell 2, is checking around 900 feet lower structurally than the discovery well, and is below 7300 feet.

West Montebello Busy

Union Oil Company's Howard 2, in the West Montebello field, was completed last week for an initial yield of 1500 barrels of 35-degree gravity oil per day from a depth of 5489 feet in the fifth zone. The company's Wilcox 2, now drilling below 5200 feet, is slated for completion in the sixth zone. Location for a third well has been selected on the company's Howard & Smith parcel. Standard's McDonald 1 was swabbed in for 600 barrels of 37-degree gravity daily at 6245 feet, and St. Helens' Eggleston 2,

CALIFORNIA Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Kraemer—		
Congress, Kraemer 1	150	3014
Athens-Rosecrans—		
Barnsdall, Rosecrans 9	1600	7857
Union, Rosecrans 21	840	7845
Rosecrans 22	1487	7915
—Montebello—		
McVicar & Rood, Manz 2	738	6259
Torrance—		
Cal-Oak, No. 1	500	4977
Lomita Drilling, No. 3	230	5001
McCowan, Chas. T.	145	5144
MacDonald & Burns, Moore 2	65	5002
Moore 9	130	4960
Peters Royalty, Torrance 2	150	5002
Texas, Wilson 12	150	5010
Wilton Oil, No. 5	750	4995
Wilmington—		
General Petroleum, Harbor Comm. (LB) 43	213	3000
Richfield, Pacific Dock (LB) 1	2042	4385
Pacific Dock (LB) 4	5280	4240
Pacific Dock (LB) 7	1265	4235
Pacific Dock (LB) 8	698	3620
Union Pacific, UP (LB) 85	1210	3997
UP (LB) 87	1390	3955
PD (LB) 3	550	4110
Universal Consolidated, Newport 1	2800	4100
Yorba Linda—		
G. C. Creager, Day 1	80	3568
Ten Section—		
Shell, KCL A-61	2962	8230
El Capitan—		
Shell, Covarrubias 1-27	573	1320
Santa Maria Valley—		
Greathouse, Fortier 1	600	4265
Union, Mallory 2	655	5135
McFarland—		
Shell, KCL 83-35	*	10061
Mount Poso—		
Marcan, Glide 5	*	2820

*Failures; †Junked; ¶Million cu. ft. gas.

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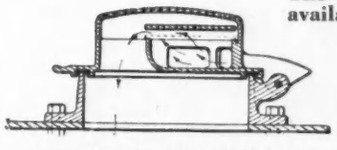

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which produced 2100 barrels daily during a formation test, has been plugged to 5663 feet for another attempt to shut out water. St. Helens Petroleum Company is completing location for Taylor 2.

At the north end of Section 35-28-25, in the Rio Brava field, Kern County, Superior Oil Company has completed Geissinger 3 as a flowing well capable of yielding 3000 barrels of 39 gravity oil and 2,000,000 cubic feet of gas per day from 11,500 feet. Scouts say the well would make around 15,000 barrels daily it opened wide. It is flowing through a 30/64-inch choke. More than 200 feet of the Vedder was penetrated.

The Vedder zone was found to be barren in a wildcat well drilled on Section 17-26-25, at McFarland, Kern County, by the Tide Water Associated Oil Company, and according to field reports this project will be abandoned at 9180 feet. Field scouts regard the chances of developing commercial production in the south end of the San Joaquin Valley as rather remote.

Rocky Mountain Fields

Big Medicine Bow well finds water flow in Tensleep sand. Shallow Osage field strike seen as probable drilling boost.

Casper, Wyo.—Another Tensleep disappointment was chalked up in the Laramie Basin area of south central Wyoming last week as water was tested in the Big Medicine Bow field by a former prolific producer of high gravity oil in the Sundance series.

Ohio Oil Company and The California Company's Kyle 3, SW NE 26-21n-79w, a former Sundance producer, tested 40 barrels of water hourly on drill stem at 7008-7140 feet, and is drilling ahead for a possible test of the Madison lime. The companies have location staked for Kyle 5, C NE NW 26-21n-79w, which will be a Sundance well.

Two weeks ago in Carbon County, in the Allen Lake gas field, Ohio abandoned Hazlett Estate 3, NW SE NW 34-23n-79w, at 4362 feet in the Tensleep with 70 degree dips indicating test was off structure. The well had water in the Tensleep at 3864-94 feet.

In the recently proved Oil Springs structure, Carbon County, Ohio Oil Company last week spudded in Baker 2-A, NWc SW SW 2-23n-79w, and is drilling at 370 feet.

A shallow oil strike in the Osage oil field of Weston County, eastern Wyoming, was made this week, which may possibly open up a new drilling era for that field which has been consistently strong in drilling activity through the past several years. Bock & Johnson's Fee 1, NE NW NW 31-47n-63w, on the north side of the field and an outside location completed for 45 barrels settled production at the extremely shallow depth of 197-215 feet in the Coffee grounds sand of the Skull Creek shales. The sand runs about 150 feet lower than the Newcastle (Muddy) sand normal producing horizon throughout the field. It is expected that several wells will be drilled immediately to this sand, and many old producers deepened. Osage production from the Newcastle sand has been declining, and operators have been having trouble meeting market demands of independent refiners in the area.

First rotary drilling well in the Osage field, the Des Moines-Osage Syndicate's Fee 15, SW SW SE 30-46n-63w, is drillnig at 1367 feet. Hugh Updike et al are rigging up cable tools for their No. 1, CEL NW SE 15-46n-64w, an Osage first report.

General Petroleum Corporation headed for a deep test in its second well in the semi-proved Cole Creek structure, 13 miles north of Casper is drilling at 1100 feet and preparing to set 16-inch joint welded surface pipe at 1200 feet. Well is State 1, NW NE SE 16-35n-77w, and is a mile north of the discovery, which pumped 250 barrels initial from the Lakota sand at 8013 feet. The discovery, with pump shut down and lease storage nearly filled and being drawn on for fuel oil, is flowing by heads at the rate of 30 barrels daily. Below the Lakota about 400 feet lies the Sundance sand, which may possibly be tested in the second well, while the First Wall Creek sand at 6686-6879 feet, and the Second Wall Creek at 7051-7077 feet showed excellent saturation, but apparently lacked the permeability to yield commercial production at the initial location. Several tight zones in the Second Wall Creek were encountered in the Salt Creek field, 20 miles north of Cole Creek, and yielded only nominal wells, whereas the majority of Salt Creek flush production was developed in wells drilled to the Second Wall Creek. Both the Wall Creek zones will be thoroughly tested in the State 1 well.

Stanolind Oil & Gas Company got underway with Midwest Oil Company 8-TP, CSE NW 35-40n-79w, a fifth deep well projected for the Tensleep formation in the Salt Creek field, Natrona County. The well is drilling at 880 feet in shale. Company's Wyoming-Associated 26 TP, CSE SW 26-40n-79w, is perforating and completing in the Tensleep sand by the selective method with 6⅝-inch production string set through the sand to 4046 feet and total depth at 4050 feet.

In the Lance Creek field, Niobrara County, Continental Oil Company's Apex 3, on OPC 3, SW NE NW 34-36n-65w, is nearing the Minnelusa series, drilling at 4635 feet. Company has locations staked for Schuricht 7-B, NW NW SE 6-35n-65w, an inside location in the sonthwest part of the field and projected for completion in the Sundance, and Tom Bell 13, SE NE SE 33-36n-65w, inside location in the northeastern part of the field, and projected for the deep Leo sand completion.

Ohio Oil Company's Elizabeth Lamb 11, SW SE SE 5-35n-65w, Lance Creek, is rigging up rotary equipment. The well is a location north, and the first of five offset wells called for by Minnelusa Oil Company's recent Leo sand completion, which was a pool record well, and extended the field a half mile south adding some 2000 proved acres.

Test to the undeveloped Tensleep horizon in the Mahoney Dome field, Carbon County, Wyoming, Sinclair-Wyoming Oil Company's Mahoney 3, CSE NW 34-26n-88w, is making rapid progress, drilling at 2620 feet. The well topped the Frontier at 973 feet, the Lakota at 2150 feet, Morrison at 2185 feet, and is coring ahead feeling for the Sundance formation. Previously drilled in 1929 by the old Producers & Refiners Corporation, the Tensleep at Mahoney received only an inadequate test when the well completed with part of a twist-off left on bottom at 4760 feet and could not be cleaned for possible flowing production and could only be improperly pumped for around 80 barrels initial. In the Wertz field, nine miles northwest of Mahoney Dome, Sinclair-Wyoming drilled the Tensleep discovery for an initial of 1850 barrels at 5859-5886 feet, completing in December, 1936.

Consolidated Oil Properties, Inc.'s Ewart 3, SW SE 16-1n-1w, Sage Creek field, Fremont County, Wyoming, after picking up oil shows at 1040 feet in the Madison lime is drilling ahead at 1140 feet.

Ohio Oil Company is continuing with Trans-Ark 1, CSL SW SW 30-57n-98w, Little Pole Cat gas field, Park County, northern Wyoming, for a deep test, possibly to the Tensleep formation, drilling at 6151 feet after passing out of the Sundance into red beds. First objective the Dakota series, and second objective the Sundance were failures.

Resolute Oil Company's deep well, State 2, CSW SW 16-57n-101w, Badger Basin field, Park County, is drilling below 6700 feet. Well will complete in the Frontier formations at around 8700 feet.

MOUNTAIN STATES Completions

MONTANA

Company Well and Location	Init. Prod. Bbls.	Depth
Glacier County (Cut Bank)—		
Texas Co., Hardwick 3, cne ne 17-32n-5w	145	3957
Toole County (Kevin-Sunburst)—		
A. E. Crumley & Sons, Fryberger 1, cne nw se 24-35n-3w	10	1610
General Oils, Ltd., State 1, sw se se 36-35n-4w	20	1853

NEW MEXICO

San Juan County (Rattlesnake)—		
Continental Oil Co., Tribal 77, nw 2-29n-19w	35	903

*Failures; †Junked; ¶Million cu. ft. gas.

Government asking bids for Cut Bank leases

Bids for leases on approximately 400 acres of public land in the Cut Bank oil and gas field in Toole and Glacier counties, Montana, will be opened by the General Land Office at Great Falls September 22, it has been announced by the Interior Department.

The land will be offered in three units of 160, 200 and 40 acres, respectively, but bids will be acceptable on two or more units. Leases will be awarded at the established royalty scale to the bidder of the highest bonus per acre.

Department officials explained that the land is being offered for lease in order to protect the government from loss through threatened drainage by reason of operations conducted on adjacent privately-owned property.

Michigan Fields

Acid dose big boost to Freeman Township discovery well. Markers indicate favorable structure two miles to north.

Mt. Pleasant, Mich.—Acidized with 200 gallons August 11, S. J. Higelmire Trustee's Van Horn 1, discovery well, Section 3-18n-6w, Freeman Township, Clare County, increased from 130 barrels to 980 barrels the first 24 hours after treatment. It flowed 810 barrels the second 24 hours.

Treatment of the discovery came after producing natural since completion on July 9 with a 286-barrel initial. Production averaged 202 barrels daily the first 24 days. It is producing from Monroe limestone at 3894½ feet.

Deepest of 9 drilling tests in the Freeman Township district this week was Gulf Refining Company's Van Horn 1, east offset to the discovery, with 1990 feet of hole drilled. First 1796 feet was drilled with rotary, then changed to cable tools. Three straight cable tool jobs also had reached the 6-inch casing point, 1700-1800 feet, first of the week.

Chief interest in the play, now spread over a district 3 miles square, outside of after acid results of the discovery, is Marshall sand markers which have been logged by 5 tests. These markers indicate favorable structure more than 2 miles north of the discovery.

Turner Petroleum Corporation continued to swab White 1, Section 28-16n-3w, Wise Township, Isabella County, a wildcat, this week with 15 to 18 barrels daily recovery. Operators plan to acidize this week. White 1, located about 4 miles east of the old Vernon district, logged the Dundee at 3654 feet and gas-oil at 3700 feet. It was bottomed at 3724 feet, but plugged back to 3714 feet when tests indicated about 3 bailers per day water from the bottom of the hole.

The shallow Traverse limestone development in Western Michigan continued to command major interest of operators this week as prolific production was developed and the new Overisel district expanded.

Biggest actual gauge reported was on Gordon Oil Company's Scholten 1, Section 1-3n-14w, Heath Township, Allegan County, two locations south of the discovery well. Gordon's well flowed 880 barrels the first 24 hours through a 2-inch lead line and 1199 barrels the second 24 hours when a 3-inch lead line was put in. It is producing from Traverse lime at 1450 feet. Lentz & Miller Inc.'s Scholten 1, Section 36-4n-14w, Salem Township, 3 locations west and 1 north of Gordon's producer, bottomed at 1464 feet, flowed 780 barrels in 9 hours, and was estimated for a 1400-barrel potential. The same company's Boerman 1, Section 6-3n-13w, Monterey Township, ½ mile southeast of the Overisel discovery, showed about 25 barrels natural but developed 150-barrel production after treatment.

As now developed, the new district, with 7 commercial wells, will be a minimum of 1 mile wide and ½ mile deep north-south. Operators look for the major extension to be drilled south of the discovery, where tests so far drilled have showed higher structurally than the discovery.

That the Western Michigan play would extend out of Allegan County south into Van Buren County loomed this week when Fisher & McCall's Wiggins 1, SE SW SE 9-1s-14w, Bloomingdale Township, drilled a gas-oil show at 1255 feet on August 15. Operators suspended drilling to cement 6-inch casing. The wildcat is located 6 miles southwest of 3 small Traverse wells in Trowbridge Township (1n-13w), Allegan County.

Completion this week by L. T. Barber of a 14,000,000 cubic foot gas well in Michigan Stray sand at 1307 feet on Mortensen 1, Section 22-12n-6w, Montcalm County, indicated that Home Township will develop into an important gas reserve. It marked the third commercial gas well drilled by Barber on Socony Vacuum Oil Company farm-outs. The 3 wells apparently prove up a 2-mile long productive strip.

Sun Oil Company's State B1, Section 9-15n-1w, Jerome Township, Midland County, had reached 4990 feet this week, drilling the Sylvania limestone. No oil saturation zones adequate to warrant testing had been logged since the Monroe lime show at 4642 feet three weeks ago.

Michigan oil operators paid an average of $1.35 per acre for 4432 acres of state oil-gas leases at the August 5 sale, the Conservation Department announced. Total of $6003 was bid on the leases. Biggest price paid was by C. W. Teater of Saginaw, who bid $1557 on a 141-acre lease in Enterprise Township, Hissaukee County, where he is currently drilling a wildcat test.

Dust storms produce a peculiar frying noise in the receivers of communication systems paralleling pipe lines through the dust area, in some cases completely drowning out conversation. The racket is produced by the discharge of electricity carried on each dust particle.

Fresh air speeds up the corrosive action of sour crudes.

MICHIGAN
Completions

Company Well and Location	Init. Prod. Bbls.	Depth
Allegan County—		
Muskegon Oil Corp., Winks 2, nw sw sw 29-4n-12w	50	1615
Miller 1, ne ne nw 16-3n-13w	65	1672
Cecil Runyan, Kubiac 1, ne nw nw 31-4n-12w	*	1588
Gordon Oil Co., Scholten 1, ne nw ne 1-3n-14w	1199	1450
Lentz & Miller, Boerman 1, nw sw nw 6-3n-13w	150	1558
Scholten 1, se se sw 36-4n-14w	1400	1465
J. W. McIntosh, Groenheide 1, nw se sw 36-4n-14w	300	1511
Sprenger & Smith, Huizen 1, nw se se 36-4n-14w	340	1466
Haynes Oil Co., Hadden 1, sw se se 20-1n-13w	25	1394
Wayland Synd., Kline 1, nw sw se 10-3n-11w	*	630
Gladwin County—		
T. F. Caldwell, Hostetler 3, nw se ne 27-18n-1w	136	3600
Ingham County—		
Darke Bros., Royston 1, se se nw 23-2n-1w	*	2507
Midland County—		
Sun, State D-1, se ne se 28-16n-1w	*	3853
Monroe County—		
Sun, Clampitt 1, nw nw nw 28-8s-6e	*	2512
Montcalm County—		
L. T. Barber, Mortensen 1, sw ne se 22-12n-6w	¶14	1307
Ogemaw County—		
Robt. W. Atha, Crow 1, se sw sw 4-21n-1e	*	2118

*Failures; †Junked; ¶Million cu. ft. gas.

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IMPORTANT WILDCAT TESTS

ALABAMA

Barbour—H. A. Stebbinger's Mrs. Alyce Robertson 1, ne ne 19-10-26, rur. **Greene**—R. T. Jeffrey et al's R. C. Lett 1, 3-20n-2e, sd 700 ft.

ARKANSAS

Calhoun—C. E. Murdock's Southern Kraft 1, se nw nw 17-14-13, spd and sd cur titles. **Clay**—Canadian American Oil Co.'s Smith 1, c ne nw 9-20-8, elev 375 ft, top Nacatoch 800 ft, sd 1005 ft shale. **Cleveland**—W. E. Allaun, Tr.'s Moore Est. 1, sw se nw 34-9-10, dr 1125 ft. **Columbia**—J. A. Longino's Baker 1, se nw nw 13-17-20, mim. E. O. Olds' Mary Denis 1, nw se sw 4-17-21, owdd, td 4513 ft. G. H. Vaughn & Shell's Garrett 1, c ne se 12-17-20, woc 9⅝ in csg 2230 ft. Standard of La.'s Tina Crumpler 1, c sw nw 15-17-19, top chalk 2391 ft, set 9⅝ in csg 2408 ft, top Permian lime 7356 ft, trying to complete, td 7500 ft. Harris Unit 1, c ne sw 15-17-19, rur. Fohs Oil Co.'s Phillips 1, nw nw sw 15-17-19, elev 269 ft, set 7-in csg 7404 ft, perforated 7380-85 ft, showed oil and sw, pb to 7286 ft, dr out cement to 7380 ft, perf csg 7370-78 ft, flowed 35 bbls oil hour, no sw, for four hours, si for gauge, old td 7424 ft. Atlantic Ref-Co.'s Harrington 1 (was M. Talley 1), c sw nw 14-17-20, fsg drill pipe, td 5820 ft; M. Talley 2, nw sw 14-17-20, lcn; Baker 1, se ne 14-17-20, elev 377 ft, top James sand 3802 ft, dr 4940 ft; Baker 2, sw ne 14-17-20, lcn; Baker 3, sw nw 14-17-20, lcn; Baker 4, nw ne 14-17-20, lcn. Petroleum Finance Corp. of Texas' Alice Baker 1, c sw nw 13-17-20, elev 359 ft, top James 3750 ft, dr 5560 ft. Barnett 1, c nw se 14-17-20, lcn. **Craighead**—Tenn. Ark., Inc.'s Ruby Martin 1, ne ne 35-14n-3e, woc 1688 ft, td 1730 ft. **Crittenden**—Stanley Oil Corp.'s D'Annar Hrs. 1, c 18-8n-9e, top Paleozoic 3243 ft, sd 3331 ft. **Little River**—J. G. Strahan's Dierks Lbr. Co. 2, sw se 21-12-28, elev 268 ft, owdd top lime 2421 ft, sd 3030 ft. **Lonoke**—J. W. Eddington et al's Anderson 1, nw ne 7-4-9, 12-in csg 85 ft, sd 600 ft. Cabot Drlg. Co.'s Benson 1 (Cabot townsite lcn), no report. J. E. Russell's Gunter 1, se se 17-5s-10w, dr 1620 ft. **Miller**—F. F. Earles' General American 1, se sw 20-14-26, sd 1232 ft. Ray Estabrook et al's E. L. Sherman 1, sw sw 29-19-28, dry abn 6330 ft. **Pulaski**—Coker Oil Corp.'s M. S. Stone 1, sw ne se 36-3n-11w, 12½-in csg 108 ft. **Union**—Joe Modisett et al's Frost Lbr. Co. 1, ne ne 8-18-12, 9⅝ in coring 6115 ft, Permian lime.

CALIFORNIA

Los Angeles: Castaic—Royal Land's No. 1, 8-4-17, dr hard shale 1041 ft. **La Mirada**—D. H. B.'s Buena Park 1, 34-3-11, rig. John McKeon's Carmenita 1, 21-3-11, dr 7288 ft. **Newhall**—National Pet. Co.'s No. 1, 27-4-16, sd 2775 ft. **Palos Verdes**—Rolling Hill's Weston 1, 27-4-14, oih, fsg 5088 ft. **San Fernando**—Tide Water Associated's Porter 1, 27-3-16, dr 3531 ft. **San Pedro**—R. T. Grady's Sepulveda 1, 23-5-14, foundation. **Whittier**—Security Land's No. 1, 8-2-11, dr 1778 ft. **Orange: Costa Mesa**—A. V. Oil's No. 1, 16-6-10, fsg 4353 ft. **San Bernardino: Chino**—Southern Counties' Los Serranos 1, 22-2-8, dr 485 ft. **Fresno: Coalinga**—Petroleum Securities' Grimes 88, 12-20-15, dr 6500 ft; No. 7-7F, 7-20-16, dr 5319 ft. Magnet's Fearon 2, 18-20-15, redrilling 3100 ft, td 3352 ft. Medford's F. C. Goetz 1, 10-20-15, dr 5484 ft. Standard's No. 82-13-C, 13-20-15, dr 2985 ft. Superior's Hight 1, 8-20-16, dr 7058 ft. Texas Co.'s Mohawk 19, 12-20-15, dr 4388 ft. Tide Water Associated's Fleishacker 57-1, 1-19-15, lcn. Guardian 66, 12-20-15, dr 3887 ft. Universal Consolidated's Leavitt-Hintze 1, 12-20-15, dr 6102 ft. **East Coalinga**—Pure's SPL 1, 31-18-17, dr 11,667 ft. **Jacalitos Hills**—Jacalitos Pet. Co.'s No. 1, 14-21-15, dr 6797 ft. Dauphin Dev. Co.'s Ragan 1, 19-21-14, dr 300 ft. **Kern: Belridge**—F. E. Abbott's No. 1, 18-27-19, rig. **Buena Vista Lake**—Ohio's KCL A-8, 32-31-26, wih, wo 11,186 ft; KCL F-1, 10-31-25, wocs 1225 ft. **Devils Den**—Gibson's Alferitz 3, 14-25-18, dr 900 ft. **Dominion**—Master Pet. Co.'s U. S. 1, 34-26-28, rur. **Elk Hills**—Richfield's KCL-Western 1, 32-30-25, dr 5121 ft. **Fruitvale**—Texas Co.'s Camp-West-Lowe 1, 7-29-27, dr 8415 ft. Continental's KCL B-2, 12-29-26, dr 7825 ft. **Grapevine-Wheeler Ridge**—Richfield's KCL 1, 28-11-20, wo 5850 ft. Wilshire's Tejon 34-1, 34-11-19, rig. **Lerdo**—Standard's KCL 18-1, 29-28-26, fsg 10,507 ft. **McFarland**—Tide Water-Associated's Pond 1, 17-26-25, dr 9069 ft. **McVan**—Bargol's Claflin 2, 10-27-27, wih 2169 ft. Desert Glow's No. 3, 14-27-27, rig. Framac's Brown 3, 22-27-27, wocs 1355 ft. **Mount Poso**—Federal Drilling's B. & G. Glide 3, 13-26-27, dr 1710 ft. **Richgrove**—Dilamar's Quinn 1, 15-25-27, co 2956 ft. Seaboard's Carver 1, 17-25-28, lcn. **San Emigdio**—Shell's KCL 1-A4, 26-11-22, r 10,251 ft. **Union Avenue**—Richfield's Union Avenue 1, 6-30-28, dr 3450 ft. **Wasco-Semi Tropic**—Continental's KCL A-3-8, 8-27-24, wocs, 11,567 ft; Seaboard-Associated KCL C-1, 36-27-24, dr 12,690 ft, td 12,778 ft. Standard's Mushrush 1, 7-27-24, dr gray shale 10,095 ft; KCL 8-B-1, 17-27-24, dr 11,635 ft. **Kings: Alpaugh**—Tri-Counties' Olson 1, 10-23-22, dr 7769 ft. **Dudley Ridge**—Falcon Oil's Josephine 2, 24-23-20, sd 6499 ft. **Tulare Lake**—Athalie Irvine's No. 1, 11-24-20, co 1500 ft, td 1650 ft. **Tulare: Ducor**—Nelson & Davison's Muller 1, 1-24-27, oih 976 ft. **Trico**—Caminol's A. O. G. 3, 29-24-24, co 6400 ft, td 7555 ft. **Santa Barbara: Carreaga**—Douglas-Stratton's No. 1, 8-8-33, pumping water and oil, 6239 ft. **Casmalia-Cat Canyon**—Standard's Los Flores L & O 1, 27-9-33, wo 6556 ft. **Gaviota**—Gaviota's Hollister 1, 35-5-33, wo 3215 ft. Wilshire's Hollister 1, 35-5-33, wih 4600 ft. **Gato Ridge**—Barnsdall's Magenheimer 5, 9-8-32, shale, oih, r 2633 ft. Petrol's Magenheimer 5-11, 9-8-32, dr 3204 ft. **Lompoc**—J. E. O'Donnell's Helen 1, 8-7-33, owdd hard shale 3598 ft. **Los Olivos**—Continental's La Laguna 2, 25-8-31, rur. United Western's Bradley 1, 15-7-30, sd 3279 ft. **Orcutt**—Warren Deuel's Garrett 1, 12-9-34, rig. **Refugio**—A. E. Tweedy's Penn 1, 34-5-31, owdd 1749 ft. **Santa Barbara Mesa**—Anaca Oil's 1, redrilling 1888 ft, td 2108 ft. Trans-Oceanic's Morrison 1, dr 2750 ft. **San Luis Obispo: Elkhorn**—California Pet. Co.'s Job 1, 6-10-24, dr hard sand 2156 ft; Irons 1, 19-10-24, dr 1710 ft. G. E. Renner's R. H. L. 1, 7-32-22, lcn. Western Plains' Bell 1, 7-31-21, sd 4010 ft. Harry E. Lee's Defiance 1, 7-32-22, dr 138 ft. **Edna**—Loma Grande's Luis 1, 28-31-13, rig. **Huasna**—Hancock's Scherer-Dickes 1, 30-12-33, dr oih 5572 ft. **Paso Robles**—Vanguard's Clark 1, 26-27-14, dr 4508 ft. **Ventura: Ojai**—High Mesa's Butcher 1, 16-4-22, sdtr 1710 ft. Holly Dev. Co.'s Macrate 1, 27-4-23, dr 4600 ft. **Sespe**—Commander's No. 7-F, 13-4-19, co to deepen 575 ft. Charles R. McKinnis' Cosley 1, 14-4-19, dr 615 ft. Merchants' Cochrane 8, 1-4-20, wocs 810 ft. St. Louis' Williamson 1, 1-4-20, co 420 ft. **Shiells Canyon**—Texas Co.'s Shiells 135, 4-3-19, wocs 209 ft. **South Mountain**—Albatross' Scheiferle 1, 17-3-20, rig. Clipper's Calco 1, 17-3-20, rig. Texas Co.'s Yale Richardson 5, 13-3-21, co 6125 ft. **Tar Creek**—Section 20's No. 1, 20-5-19, dr 2060 ft. **Timber Canyon**—J. W. Martin's Arnett 1, 15-4-21, dr 1230 ft. Stallings, Senter & Ahlburg's Stallings 1, 24-4-21, do 1245 ft, td 1445 ft. **Ventura**—Ventura Drilling's No. 1, 10-3-23, co 150 ft.

ABBREVIATIONS

The following abbreviations, signs, etc., are used in completions and wildcat reports in THE OIL WEEKLY.

*—*dry hole abandoned well.*
‡—*salt water (completions).*
†—*junked and abandoned.*
¶—*million feet of gas.*
abd—*abandoned.*
bbls—*barrels.*
br—*building rig.*
bs—*basic sediment.*
csg—*casing.*
co—*cleaning out.*
dd—*drilling deeper.*
dk—*derrick.*
dr—*drilling.*
fsg—*fishing.*
ft—*feet.*
hfw—*hole full of water.*
in—*inches.*
lcn—*location.*
m—*milling.*
mim—*moving in materials.*
mit—*moving in tools.*
mot—*milling on tools.*
n, s, e, w—*north, south, east, west.*
oih—*oil in hole.*
owdd—*old well drilling deeper.*
owpb—*old well plugging back.*
pb—*plugged back or plugging back.*
r—*reaming.*
rog—*rig on the ground.*
rur—*rigging up rotary tools.*
rust—*rigging up standard tools.*
sd—*shut down.*
sdtr—*sidetracking.*
sg—*show gas.*
si—*shut in.*
so—*show oil.*
so&g—*show oil and gas.*
spd—*spudding.*
sr—*straight reaming.*
sw—*salt water.*
td—*total depth.*
ur—*underreaming.*
wih—*water in the hole.*
wo—*workover.*
wocs—*waiting on cement to set.*
wosr—*waiting on standard rig.*

ILLINOIS

Bond—Farrely's Kyle 1, sw nw nw 28-4n-4w, dr 1260 ft. Leavitt et al's Biggs 1, sw se ne 24-4n-2w, ur td 1345 ft. Sheless et al's Carter 1, c ne ne nw 14-4n-1w, dr 1210 ft. Huppard et al's Bresser 1, sw ne nw 21-6n-4w, sd 1525 ft. **Cass**—Duval's Bowen 1, nw nw se 30-17n-14w, sd 530 ft. **Champaign**—Negra's Block 1, se se ne 33-18n-10e, dr 510 ft. **Clinton**—Schlafly's Brinkman 1, ne ne nw 31-1n-2w, dr 1585 ft. Phelps' Dodillet 1, se nw sw 25-1n-1w, dr 1365 ft. Traham et al's Nicolay 1, sw nw se 14-2n-1w, dr 525 ft. Sappington et al's Hilgeman 1, se ne nw 22-3n-3w, sd 1025 ft. M. & K. Kesher 1, ne nw ne 10-3n-2w, mit. **Coles**—Kingwood's Timberlin 1, sw se se 21-11n-10e, dr 1245 ft. Mable et al's Oakland 1, nw nw ne 31-14n-14w, dr 1010 ft. **Crawford**—Kesl et al's Warner 1, nec 23-4n-11w, dr 1725 ft. **Cumberland**—National Consumer's Morrison 1, ne se ne 17-9n-9e, dr 1225 ft. **Dewitt**—Smith et al's Hill 1, sw nw nw 20-21n-1e, sd 130 ft. **Edgar**—Meyers' 1-A Brinkerhoff, se se 26-13n-13w, sd 640 ft. Bearcey et al's Blair 1, nw ne nw 24-14n-14w, dr 210 ft. **Edwards**—Leach Bros.' Lee 1, sw ne se 11-1n-10e, show oil 3370 ft, to dr deeper. **Fayette**—Sharp et al's Niles 1, sw ne sw 10-6n-3e, ru. Hayes et al's Thull 1, c se sw se 14-4n-1e, dr 490 ft. Jones et al's Willis 1, ne sw se 6-6n-3e, cor 1750 ft. Whisenant et al's Zanders 1, c sw se nw36-9n-3e, pb 1758 ft, co. Jarvis' Welker 1, c ne se nw 31-7n-3e, co 1569 ft. **Franklin**—Adams' Coal 1, sw sw ne 19-5n-3e, ru. **Gallatin**—Bailey et al's Logan 1, se ne ne 21-8s-8e, dr 1090 ft. **Jasper**—Continental's Eveland 1, nwc 36-7n-9e, dr 3040 ft. **Jefferson**—Gill's Smithey 1, c wp nw ne ne 6-1s-1e, co 1762 ft. Crosley et al's Fitzgerald 1, nec 6-1s-1e, dr 1490 ft. **Johnson**—Elzie's Boner 1, c sw ne 30-11s-3e, dr 140 ft. **Macon**—Sun's Powers 1, sw sw ne 30-17n-2e, sho oil 2565 ft, sd 2992 ft. **Macoupin**—Spence's Fee 1, se sw sw 13-8n-9w, dr 1295 ft. **Madison**—Spivey's Storms 1, se sw ne 15-6n-8w, fsh td 1420 ft. **Marion**—Gray et al's Welch 1, ep ne nw 2-1n-13, lcn. Thompson's Wright 1, e ne se ne 8-1n-1e, ur td 1135 ft. Gardenhire's Weener 1, sw ne se 12-1n-13, spd. Mammoth's Buchannon 1, c sw se sw 9-1n-2e, co td 1896 ft. Dalton's Dalton 1, ne se ne 19-1n-3e, dr 2265 ft. Dalton's Clifton 1, ne sw sw 15-1n-4e, sd 2682 ft, show oil. Boyce et al's Foster 1, c nw nw se 10-2n-1e, dr 850 ft. Oil Royalty's Suggs 1, c w½ nw nw 11-2n-1e, sd 900 ft. Morrison's Rigginghouse 1, sw ne se 19-2n-1e, sd 2100 ft. Copps' Wesner 1, sw sw nw 24-2n-1e, ur. Carpenter et al's Holsapple 1, ne ne se 25-2n-1e, dr 790 ft. Sheppard et al's Greer 1, sw ne sw 30-2n-2e, ru. Pyramid's Roddy 1, se se sw 20-2n-3e, sd 2207 ft. Coyer et al's Mulvaney 1, se ne se 6-2n-4e, sd 700 ft. Marions Wilson 1, ne ne se 18-3n-3e, sd 2225 ft. Shobe's Morey 1, sec 4-4n-1e, ru. Penn-Illinois Nichols 1, ne sw sw 22-4n-2e, ru. **Massac**—Kahle et al's Harvick 1, sec 23-14n-3e, dr 2890 ft. **Menard**—Scroggins Fee 1, c sw sw 24-19n-5w, pb td 1570 ft. **Montgomery**—Myers et al's Klekamp 1, sw se 29-8n-5w, to test 555 ft. **Morgan**—Waverly's Hubbs 1, c ep ep ep 33-14n-8w, dr 815 ft. Alexander's Gray 1, ep ne ne 36-15n-9w, lcn. **Piatt**—Pray's Baker 1, sw ne ne 17-18n-8e, sd 2005 ft. **Pope**—Whitlock et al's Anthis 1, nw nw ne 12-11s-5e, sd 1730 ft. **Randolph**—Cain et al's Smiley 1, sec 31-4s-5w, sd 560 ft. Schlesberg et a'ls Hayer 1, se nw sw 4-5s-6w, sd 350 ft. **St. Clair**—Neil's Pfeffer 1, ep se ne 20-2n-6w, sd 655 ft. Group Oils Buse 1, c ne se 13-2s-6w, dr 980 ft. **Saline**—Carpenter et als Sloan 1, se se sw 32-1s-6e, dk. Siegel et al's Choisser 1, ne nw nw 5-6s-7w, sd 100 ft. **Sangamon**—Williams et al's King 1, nw se se 24-15n-7w, mirt td 1385 ft. **Shelby**—Carter's Bartscht 1, c sw se 20-9n-4e, ru. Jolly et al's Jenkins 1, sec 26-10-4e, sd 1000 ft. Lewis et al's Hopkins 1, c se se se 32-10n-4e, spd and sd. Producers' Boys 1, c nw ne nw 27-12n-3e, dr 1695 ft. **Washington**—Morris' Marquard 1, se nw sw 36-1s-5w, dr 620 ft. Salvage's Reinkensmeyer 1, se se nw 11-1s-2w, sd 1030 ft. Thompson's Musial 1, se sw nw 19-3n-1w, co td 1260 ft. **Wayne**—Gordon et al's Fitch 1, c wp sw nw 11-1n-8e, lcn. Sloan et al's Walker 1, c nw nw nw 16-3n-9e, dr 2990 ft. Duncan's Ullom 1, c wp sw nw 22-2n-8e, ru. **White**—Arab's Doerner 1, sec 12-7s-8e, dr 2445 ft. **Williamson**—Geological Synd's Scott 1, sw se sw 4-10s-4e, dr 1440 ft.

KANSAS

Barton—Continental et al's Pichner 1, se nw 23-16-11w, lcn. Carlock et al's Demel 1, ne nw 30-17-13w, spd and sd. **Butler**—Ramsey et al's Fee 2, nw sw ne 8-24-5e, dr 1385 ft. Simpson's Equitable Life 1, swc 15-25-5e, ur td 2784 ft. Solomon et al's Sawyer 1, sw nw sw 2-28-7e, dr 165 ft. Pryor & Lockhart's Lietzke 1, nw sw nw 24-28-7e, dr 1210 ft. Bowland et al's Frankson 1, se sw 2-29-6e, spd and sd. **Cowley**—Barnsdall's Elliott 1, nec 5-31-5e, cellar. McNab's O'Neal 1, nw nw se 27-32-3e, dr 1050 ft. **Ellis**—Davis' Smith 1, sw nw ne 11-12-16w, rng csg 3380 ft. **Geary**—Fowler et al's Aye 1, nw sw nw 10-12-8e, spd and sd. **Greenwood**—McGinnis et al's Smith 1, nw ne ne 10-24-13e, dr 600 ft. **Kingman**—Bunte Bros.' Shepard 1, sec 10-27-10w, pb to Mississippi lime and set csg. **McPherson**—Marylyn's Dixon 1, nw ne nw 7-19-2w, sd

1850 ft. **Marion**—Johnson et al's Miltz 1, swc 24-17-4e, dr 1775 ft. Harwood's Kaufman 1, nw nw se 27-17-4e, fsg 1240 ft. **Meade**—Pacific Midwest's Elliott 1, nec 8-30-29w, cel. Cragin et al's Adams 1, nw nw se 22-34-30w, rur. **Ness**—Carlock et al's Smith 1, c sw se 11-17-25w, rig. Sinclair Prairie's McKinley 1, sw nw 26-18-26w, dr 1650 ft. **Norton**—Vickers' Bozarth 1, c sw sw 15-5-24w, woc 415 ft. **Ottawa**—Babcock's Copeman 1, c nl s½ s½ se 7-10-2w, dr 1990 ft. **Rice**—Cities Service's Flora 1, sw ne 12-19-10w, dr 2995 ft. Cities Service's Frees 1, c sl nw 20-18-9w, dr 2515 ft. **Rooks**—Shindhelm et al's Doer 1, se sw 13-9-16w, rng csg td 3257 ft. Hall's Kruse 1, se ne 3-10-16w, td 3212 ft, pb 3145 ft, show oil. Producers et al's Ham 1, sw nw 25-7-19w, sd 1800 ft. **Russell**—Stearns' Stielow 1, nwc 32-11-14w, sd 3075 ft. Hinkle et al's Kaufman 1, se nw 10-15-12w, dr 2410 ft. **Saline**—Sullivan et al's Erickson 1, nec 28-16-3w, woc 300 ft. **Sedgwick**—Hutton's Phillips 1, nw ne se 14-26-1w, rig. Hudson et al's Fulton 1, ne se 35-28-1e, sd 2285 ft. **Shawnee**—Edwards' Detrich 1, c nw se 21-14-15e, sd 1130 ft. **Stafford**—Rowley et al's Sittner 1, se ne 35-12-12w, dr 3050 ft. Newbold et al's Walker 1, ne ne sw 24-24-12w, woc 258 ft. **Thomas**—Ramsey et al's Ryan 1, c ne se 27-8-32w, lcn. **Woodson**—Nathan et al's Ellis 1, nw nw se 35-25-14e, dr 1100 ft.

SOUTH LOUISIANA

Acadia—Atlantic's Klumpp 1, northeast of Tepetate, 12-7s-2w, dk. **Avoyelles**—Magnolia's Bowden 1, Evergreen area, 7-2s-4e, roads. **Calcasieu**—Sun's Lutcher Moore 1, Luntia area, 12-8s-3w, dk. **Cameron**—Federal Royalty Co.'s State 1, Calcasieu Lake, 1-13s-9w, lcn. Humble's Hanszen 2, Chalkley area, 9-12s-6w, 9782 ft shale. Union Sulphur's Miami Corp. 3, Willow Lake prospect, 33-12s-8w, sd 10 ft. **Jefferson Davis**—Continental's J. Sturdivant 1, South Roanoke, 36-10s-4w, sd 11,039 ft. Union Sulphur's Liggett 1, Fenton area, 36-7s-5w, abn 8392 ft. **Lafourche**—Sun's Dibert Stark and Brown 1, Chacahoula dome, 70-15s-15e, dr shale 7110 ft. Texas Co.'s La Terre 1, Golden Meadows prospect, 1-20s-21e, woc 8898 ft. **Orleans**—W. T. Burton's State 1, in Lake Ponchartrain, 10s-13e, dr shale 7598 ft; same operator's Faubourgde Monteluzin 2-B, Lake Ponchartrain, 11s-13e, dr shale 3315 ft. **St. James**—Continental's Colonial Sugars 1, Convent, 46-12s-5e, running elec. logging device 8685 ft. **St. John**—Shell's Godchaux Sugar 1, La Place, 97-11s-7e, dr shale 8486 ft. **St. Landry**—Herton's Thistlewaite Lbr. Co. 1, Beggs area, 60-4s-4e, ru. **St. Martin**—Shell's Jeanerette Lumber Co. 1, West Lake Verrett area, 14-14s-12e, fsh 10,550 ft. Texas Co.'s St. Martin Land Co. 11, Henderson, 21-8s-7e, waiting on orders at 8916 ft; same operator's State 6, Lake Mongouloui area, 10-10s-9e, dr water sand 6810 ft. **Terrebonne**—Fohs Oil Co.'s State Bay Baptiste 1, La Terre area, 41-19s-19e, fsh 8777 ft. Shell's Peters 1, South of Houma, 73-18s-18e, repairing rig 9434 ft; same operator's Realty Operators 1-C, Minor area, 10-18s-16e, waiting on orders 11,208 ft. Texas Co.'s State Coon Point 1, Caillou Bay, 22s-14e, abn 4922 ft.

NORTH LOUISIANA

Bienville—DeSoto O&G Co.'s Wm. Ashley 3, c nw se 15-16n-10w, rog. Mrs. B. A. Fleming 1, nw nw 18-16n-9w, claim sg, so, arr set csg, td 5303 ft. **Bossier**—Lloyd & Sloan's B. A. Sherrill 1, se se 12-19n-12w, sd 785 ft. **Caddo**—Oils, Inc.'s A. Cazaux 1, sw sw 16-16n-13w, 10-in csg 300 ft, dr 3375 ft. J. Thomas Driscoll, Inc.'s Woolworth 1, se se 19-18-14, lcn. Superior Oil Corp. and F. W. Martin's Andrew Ouerbes 1, 37-17n-13w, lcn. **Caldwell**—Oakes et al's Kyles 1, sw ne 18-11n-3e, sd 470 ft. **Catahoula**—G. E. Foster et al's W. S. Peck 1, c s½ 39-10n-8e, sd 620 ft. **Claiborne**—E. T. Oakes et al's Kilgore 1, ne se 28-21n-5w, elev 288 ft, 5¾-in csg 5290 ft, logged saturated lime 5297-5305 ft and 5307-12 ft, swabbing oil, td 5337 ft. J. N. Buchanan's Miller Est. 1, ne sw 11-20n-8w, rur. **De Soto**—S. P. Taylor's Barnhart 1, ne se 20-14n-12w, mim. Samuel S. Alexander's Stell A-1, ne ne 5-12n-16w, dr 1725 ft. Potter and Rubeling's Smith 1, sw se nw 6-12n-15w, lcn. G. H. Collins et al's Joyner 2, sw ne 28-11n-12w, set 7-in csg 2892 ft, woc, td 2925 ft. Al Sutton et al (formerly Fuqua and Gay), Frost-Johnson 1, se se 25-11n-15w, spd. **Grant**—C. L. Thompson et al's Woodward 1, ne sw 10-6n-3w, top Wilcox 2867 ft, sd 4527 ft. C. R. Bowers et al's Harrison 1, ne sw 21-8n-5w, sd 1110 ft. **Madison**—Continental Oil Co.'s Singer Mfg. Co. 1, n½ ne nw 3-15n-11e, dr 2965 ft sandy shale. **Natchitoches**—Joe E. Popkins' Peavy-Wilson 1, nw nw 36-7n-9w, sd 300 ft. W. T. Ryan et al's Lambert 1, nw nw 4-8n-9w, sd 4189 ft. Raines Bros.' Allen Plantation 1, ne sw 22-10n-9w, fsg 1250 ft. **Rapides**—J. J. Farrell's Certner 1, nw se 16-4n-1e, rur. E. F. Kalb et al's Lee Lbr. Co. 1, nw sw 9-5n-3e, spd and sd. **Red River**—Glassell & Whitehurst's LeLong 1, ne nw ne 25-12n-11w, sd 3113 ft. W. J. Hunter's Long Bell 4, se se 30-13n-9w, testing. **Sabine**—W. L. McClanahan et al's Frost-Johnson 1, se ne sw 22-9n-13w, elev 196.2 ft, top Nacatoch 1531 ft, top Saratoga chalk 1578 ft, Annona chalk 1816-2041 ft, Austin chalk 2854-3007 ft, top Glen Rose 3286 ft, blew out gas, so 4745 ft, pb to 3050 ft, tested mud, sg, arr pb to 1750 ft. H. M. Sneed et al's Leone 1, nw se 8-7n-13w, rur. J. G. Sutton-Zwolle Oil Co.'s Bowman-Hicks 2, w½ sw nw 24-7n-13w, lcn. Albert Reich et al's Glaque 1, ne se ne 27-7n-14w, sd 4317 ft. F. W. Martin & Co.'s Sabine 2, c e½ ne ne 23-7n-14w, lcn. A. Boykin King's Sabine 1, c nw nw 19-7n-13w, sd 4517 ft, may deepen to 6000 feet; Sabine 1-A, c w½ nw nw 19-7n-13w, lcn; Sabine 2, c sw nw 19-7n-13w, lcn. Zwolle Synd.'s Mansfield Hdw. Lbr. Co. 1, ne ne 8-7n-14w, dr 3990 ft. Tropical Oil Co.'s (was Quality Prod. Co.), Long Bell Lbr. Co. 1, se se 5-8n-13w, dr 1981 ft. **Webster**—W. M. Chambers' Thomas 1, se se 11-22n-11w, ru and sd. Magnolia's Pardee Co. 1, ne nw ne 17-23n-11w, elev 203 ft, top Blossom 2665 ft, tested 17 joints sw 16 min dst 2664-73 ft, top Pettit 5920 ft, logged good porosity so, sg, 5920-6025 ft, sr 5600 ft, td 6025 ft; H. M. Branton 1, ne ne 6-22n-9w, rur. Bailey-Rosenberry 1, nw se 29-23n-9w, lcn.

MISSISSIPPI

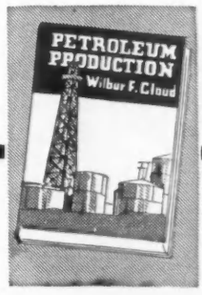
Calhoun—L. C. Lucas' B. C. Boland 1, sw sw 9-22n-9e, sp and sd. S. & O. Properties, Inc.'s G. C. Cooner 1, se ne 12-24n-8e, sd 2120 ft. **Claiborne**—Claiborne County Dev. Co.'s Ruth Hayden 1, s½ se 55-11n-2e, rur to deepen, td 2950 ft. **George**—Cleve Love et al's J. J. Newman Lbr. Co. 2, c sw 9-1s-8w, elev 111 ft, 10-in csg 1374 ft, top Het 1382 ft, dr 2640 ft lime and shale. **Hinds**—Cleve Love et al's Montgomery 1, sw se se 28-6n-4w, lcn. S. F. Johnson 1, ne se 29-6n-1w, elev 343 ft, top black shale 3040 ft, top chalk 3097 ft, top Eutaw 3617 ft, top red beds 3657 ft, 7-in csg 3355 ft, sd 3707 ft. Progressive Realty Co. 1, se sw 35-6n-4w, top Wilcox 2750 ft, ran electrical tester, sd 6596 ft. G. Jeffries' Gaddis Farms Inc., 1, nw se 26-7n-4w, sd 3253 ft sandy shale. **Lamar**—Southern Mississippi Pet. Corp.'s Morris 1, nw se 42n-14w, elev 332 ft, top Het 1138 ft, 10-in csg 1144 ft, top Vicksburg 1615 ft, top Minden lime 2123 ft, top Wilcox 2735-53 ft, sd 3029 ft (Wilcox). **Montgomery**—Dr. T. A. Chichester et al's E. C. Mitchell 1, se nw sw 30-30n-7e, dk. **Pontotoc**—Waldrop, Melvin & Waldrop's Bray 1, sec n½ sw 17-11s-1e, set surf csg 166 ft, sd 280 ft shale. **Simpson**—Goodwill O&G Co.'s Berry 1, se sw 33-2n-4e, elev 307 ft, sd 2810 ft gray gumbo. Cleve Love et al's N. E. Garner 1, 1-10n-17w, spd and sd. **Yalabousha**—Acme Holding Co.'s S. D. Boyle 1, nw nw 33-25n-7e, elev 415 ft, dr 2402 ft (Tuscaloosa).

MICHIGAN

Allegan—O'Brien's Raber 1, 36-2n-13w, dr 433 ft. Henry's Honeysette 1, 27-1n-11w, set 6-in 1477 ft. Hubel Oil Co.'s MacVean 1, 19-2n-11w, dr 1860 ft. United Oil Co.'s Low 1, 24-1n-15w, sd 1170 ft. Leighton Oil Co.'s Wiggins 1, 15-4n-11w, lcn. Miller & Cook's Wood 1, 3-1n-12w, dr 770 ft. Leonard Oil Co.'s Coning 1, 35-3n-16w, lcn. **Arenac**—McHugh's Stevens 1, 8-19n-5e, dr 350 ft. Tamblyn's McFarlan 1, 34-20n-3e, fsg 2165 ft. **Barry**—Associated's Natzel 1, 4-2n-9w, sd 1786 ft. Collin & Soper's Simmons 1, 3-4n-10w, co 1315 ft. **Calhoun**—Verona Crude Oil's Fruin 1, 29-1s-7w, r 2060 ft. **Cass**—Obenauer's Neel 1, 6-5s-14w, set 6-in 990 ft. **Gladwin**—Brehm's Kitchen 1, 20-19n-1w, sd 1405 ft. Smith Pet. Co.'s Nash 1, 28-20n-2w, sd 1450 ft. **Gratiot**—Kritzman's Ryan 1, 32-10n-1w, sd 1075 ft. Michigan Chemical Co.'s Fee 9, 24-12n-3w, dr 3610 ft. **Isabella**—Turner Pet. Co.'s White 1, 28-16n-3w, Dundee 3654 ft, so 3700 ft, td 3724 ft, pb 3714 ft. swab 20 barrels oil daily on 4-day test, will acidize. **Kalamazoo**—Thourlby's Vliestra 1, 31-1s-11w, dr 1011 ft. Premier's Munson 1, 9-2s-12w, rig. **Kent**—Comstock's Donovan 1, 4-8n-9w, sd 2400 ft. MacCallum's Story 1, 32-7n-12w, lcn. **Lapeer**—Hether's Foster 1, 26-9n-12e, sd 1375 ft. **Mackinac**—Van Kuren's Hiawatha 2, 27-44n-9w, dr 650 ft. **Macomb**—New Haven Oil Co.'s Schultz 1, 22-4n-14e, dr 300 ft. **Mecosta**—Daily Crude Oil Co.'s Thrush 1, 25-16n-7w, dr 2100 ft. **Midland**—Sun's State B-1, 9-15n-1w, dr 4990 ft. Stork Oil Co.'s Steger 1, 23-15n-2e, lcn. Teater's Tushingham 1, 26-16n-2w, dr 2990 ft. **Missaukee**—Teater's Gray 1, 32-23n-5w, dr 2900 ft. Moser Oil Co.'s Scherenhelm 1, 36-23n-7w, r 1350 ft. **Montcalm**—Rex Oil Co.'s Hansen 1, 19-11n-8w, set 5-in 2980 ft; Cheney 1, 11-9n-5w, dr 200 ft. Taggart's Jacks 2, 7-12n-9w, Dundee 3252 ft, dr 3356 ft. **Otsego**—Summer's Geraldine 1, 28-30n-3w, dr 550 ft. Snow's Moore 1, 13-29n-2w, sd 1200 ft. William's Yuill 1, 9-32n-3w, sd 1450 ft. **Ottawa**—Sommerville's Bownan 1, 19-7n-14w, dr 450 ft. **Roscommon**—Sun's Hanson Co. 1, 2-23n-2w, dr 690 ft. Kirkham's Miller 2, 6-22n-2w, dr 450 ft; Helen 1, 36-23n-2w, rig. **St. Clair**—Bryan's Graham 1, 11-8n-16e, fsg 285 ft. Huronic Oil Co.'s May 1, 4-7n-17e, sd 250 ft. **Shiawassee**—Buzard's McCall 1, 11-6n-3e, sd 1550 ft. **Tuscola**—Meridith's Sand Co. 1, 32-11n-8e, sd 2390 ft. **Van Buren**—Whitehill's Webster 1, 35-2s-16w, rig. Fletcher & McCall's Wiggins 1, 9-1s-14w, set 6-in 1255 ft, so&g. **Osceola**—Fortney's Beall 1, 25-18n-9w, rig.

OKLAHOMA

Atoka—Shelton's Leo 1, ne nw sw 2-4s-10e, dr 3437 ft. **Beckham**—Wagnor's McGee 1, nec se 25-8n-22w, sd 1029 ft. **Choctaw**—Ross' Hardy 1, sec nw 21-7s-15e, testing 892-895½ ft. **Coal**—Carter's Mote 1, c e½ sw nw 19-2n-9e, dr 5966 ft. **Comanche**—Eldridge's Aetna 1, sw se sw 2-1n-10w, fsg 450 ft. Roach's Green 1-A, sec sw 2-1n-13w, dr 895 ft. Midnite's Howe 1, nwc 20-2n-13w, dr 595 ft. **Garfield**—I.T.I.O.'s Kichin 1, c se se 17-22n-5w, dr 5210 ft. Champlin's Boehm 1, swc ne 4-24n-8w, fsg 6020 ft. **Hughes**—Holdenville's Fairgrounds 1, sec 13-7n-8e, sd 1160 ft. Marbett's Breeding 1, ne sw ne 12-7n-8e, testing 1084-1094 ft. Amerada's Conard 1, ne nw sw



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33-10n-10e, dr 3996 ft. **Kay**—Blosser's Rudolph 1, nec sw 27-29n-1w, sd 3086 ft. **Kiowa**—Hughes' Fultz 1, sec 10-6n-18w, set whipstock 1130 ft. Anderson's School Land 1, c sec 14-6n-17w, dr 1785 ft. **Kingfisher**—Hollenback's Zerger 1, c se sw 5-18n-6w, sd 1241 ft. **Lincoln**—British American's Markwell 1, c e½ e½ ne 26-12n-4e, dr 3985 ft. **Love**—Sinclair Prairie's Peabody 1, nec 35-6s-2w, dr 6120 ft. **Muskogee**—Heydrick's Paschall 1, ne se nw 22-13n-19e, sd 820 ft. **Noble**—Hollenback's Mathews 1, c sw nw 9-20n-1e, dr 3175 ft. **Pawnee**—Sinclair Prairie's McQuain 1, ne nw ne 22-19n-1e, td 4594 ft. **Pontotoc**—Moore's Payne 1, se nw se 16-4n-4e, testing 997 ft. **Pottawatomie**—Speers' Vinson 1, sw nw sw 29-8n-5e, dr 75 ft. Pace's Riley 1, nec se 2-9n-3e, dr 350 ft. **Seminole**—Boettcher's Morgan 1, se ne nw 8-5n-7e, dr 1995 ft. **Tillman**—Smith's Hammel 2, ne nw nw 6-5s-15w, dr 2195 ft. **Washita**—McWhirter's Fee 1, ne sw sw 34-8n-19w, fsg 2172 ft. Continental's Proctor 1, c nw 28-10n-20w, dr 450 ft.

WEST TEXAS

(This report is confined to the south and east portion of the Permian basin and the Delaware basin).

Brewster—G. H. Storey et al's J. P. Wilson 1, c se nw T. & St. L. sec 3, blk 212, elev 3609 ft, sd 2545 ft. H. D. Wilcox et al's W. H. Kokernot 1, nw sw sec 12, blk C, J. V. Massey sur, sd 1871 ft. **Coke**—Barnett Pet. Corp.'s J. E. Mims 1, sec T&P sec 39, blk W, elev 2352 ft, testing 1861 ft. **Crane**—Ruston L. Ardrey, Tr.'s J. B. Tubb 1, swc PSL sec 20, blk B-32, elev 2552 ft, top anhydrite 510 ft, top salt 715 ft, top Yates 1520 ft, blew out at 2760 ft, pb to 850 ft, jkd, skid rig. Gulf's M. B. McKnight 4, c ne se PSL sec 3, blk B-21, elev 2701 ft, top anhydrite 490 ft, top Simpson 6160 ft, fsh core bbl, td 6280 ft; University-Lassiter 2-B, swc sec 27, blk 30, elev 2596 ft, top anhydrite 1075 ft, top salt 1130 ft, dr 2635 ft; W. N. Waddell et al 9, c ne ne PSL sec 7, blk B-27, mim. Magnolia's University 1-15, swc sec 15, blk 30, elev 2637 ft, top Yates 2230 ft, top lime 3075 ft, top pay 3199 ft, td in sul w 3327 ft, pb to 3267 ft, shot 120 qts 3204-41 ft, used 3000 gals acid, pumped 127 bbls oil initial. The Texas Co.'s University 1-G, nec sec 7, blk 30, elev 2642 ft, top anhydrite 1127 ft, top salt 1190 ft, top Yates 2150 ft, top lime 3000 ft, oil pay 3185-3220 ft, dr with 500 ft oih at 3461 ft. **Crockett**—Will Ohlhausen et al's J. W. Owens 1, sd 1936 ft. J. T. Petty et al's A. C. Hoover 1, sec GC&SF sec 11, blk 1, sp and sd. **Culberson**—J. E. Fitz-Patrick et al's Wm. Cameron & Co. 1, c nw nw PSL sec 24, blk 81, sd 945 ft. Preston W. Lewis et al's Nieuhaus 1, se se ne PSL sec 13, blk 109, top Delaware lime 1178 ft, dr 1805 ft. Harry J. W. Nieuhaus et al's C. M. Caldwell 1, se nw PSL sec 15, blk 109, elev 3878 ft, top Delaware lime 1165 ft, top sand 1215 ft, sd 2500 ft. L. G. Sheddan et al's S. J. Isaacs 1, center PSL sec 25, blk 52, dr 265 ft. **Jeff Davis**—H. F. Wilcox O&G Co.'s Jones-Coffield 1, nec H&TC sec 121, blk 4, elev 4537 ft, sd 3747 ft. **Ector**—Sinclair Prairie Oil Co.'s J. L. Johnson 3-A, nwc T&P sec 37, blk 43, T-1-S, elev 2992 ft, top anhydrite 1810 ft, show oil 4467-71 ft, dry and abd in water 4610 ft; Paul Moss 2-B, swc T&P sec 40, blk 44, T-2-S, elev 3050 ft, top anhydrite 1390 ft, cem cas 3760 ft. Ben Rogers and Bert Fields' R. H. Speer-Owenwood 1, sw nw ne T&P sec 6, blk 44, T-2-S, rig. **El Paso**—Tri-State Oil Co.'s Kinkel Bros. 1, nec sec 237, S. F. No. 7232, elev 3977, fsh 3571 ft. **Fisher**—Forest Dev. Corp.'s W. E. Morrow 1, c nw nw H&TC sec 48, blk 2, coring 3805 ft. S. & D. Daube et al's R. S. Hardy 1, near c sw sw H&TC sec 49, blk 2, dr 2720 ft. Owens-Snebold Oil Corp.-A. C. Varner's J. H. Milsap 1, swc w½ ne H&TC sec 61, blk 1, dr 995 ft. T. G. Shaw Oil Corp.'s J. B. Stribling 1, c se se H&TC sec 110, blk 3, elev 2113 ft, top red shale 2130 ft, sd repairs 3773 ft. **Tom Green**—Southern Cross Oil Co.'s J. W. Wilson-Upton 1, c nw AB&M sec 30, blk A, lcn abd. Spinner Oil Co.-H. L. Fannin's B. Reed 1, sub-div 39, Mayson-Perry sur, trace gas 4475-95 ft, dr by junk, td 4495 ft. M. R. Stuard et al's Frank Garlitz 1, J. H. Mueller sur No. 2201, Certf. No. 760, dry and abd 785 ft. J. B. Watson et al's Llano 1, sec 16, Llano C.S.L. sur, run cas 230 ft. **Howard**—S. S. Owens et al's D. S. Wright 1, nw se se T&P sec 33, blk 33, T-3-N, elev 2747 ft, sd 1375 ft. Ward Powell et al's Guitar 1, c ne sec 17, blk A, Bauer-Cockrell sur, elev 2508 ft, top anhydrite 1195 ft, top salt 1255 ft, dr 2665 ft. **Hudspeth**—Haymon Krupp Oil & Land Co.'s K. S. Briggs 1, nwc T&P sec 24, blk 73, Tsp. 7, elev 4016 ft, dr 4366 ft; S. J. Thaxton 1, near sec ne se T&P sec 34, blk 74, Tsp. 6, top gray lime 4580 ft, ur 4740 ft. **Loving**—Argo Oil Corp.'s T&P Land Trust 1, se se sw T&P sec 17, blk 55, Tsp. 1, elev 3097 ft, top Delaware sand 3926 ft, pay 3945-84 ft, shot 130 qts 3945-75 ft, swabs 30 bbls oil and 15 bbls water daily; T&P Land Trust 1-B, nwc T&P sec 21, blk 55, Tsp. 1, elev — ft, top anhydrite 1307 ft, cem 7-inch cas 3940 ft. Shell's T&P Land Trust 1-a, near sw se se T&P sec 17, blk 55, Tsp. 1, elev 3106 ft, td 3705 ft, pb to 3351 ft, jkd and abd. **Menard**—Hartzell-Nawn & O'Hara Synd.'s Wilhelm 1, sec se sec 24, Indianola Ry. sur, A-1795, dry and abd 655 ft. Lee Pet. Co.-C. D. Hagerty's Jas. Callan 1, swc e½ of J. M. Franz sur, sec 36, elev 2026 ft, sd 1270 ft. **Nolan**—Frank Oyster-Ajax Drl. Co. et al's E. H. Withers 1, c sw T&P sec 65, blk 21, elev 2323 ft, lost returns, td 4295 ft. P. G. Smith et al's E. E. Adrian 1, near c sw T&P sec 43, blk 20, lcn. **Pecos**—Cox & Moore's White-Baker 1, c sw se T. C. sec 43, blk Z, sd 500 ft. Cardinal Oil Co.'s White-Baker 2-A-37, ne ne nw T. C. sec 37, blk Z, cem surface pipe. J. N. Gregory et al's O'Neill-Humble 1, south cor n¼ H&GN sec 74, blk 10, dr 300 ft. Magnolia & Tex-Mex Pet. Corp.'s J. H. McKee 1-a, near nw nw sw H&GN sec 24, blk 9 (jkd. twice), elev 2385 ft, top Simpson 4775 ft, top Ellenberger 6102 ft, sul w 6262-67 ft, pb to 5306 ft, shot 190 qts 5265-5300 ft, testing. E. R. Minshall et al's Haynie 1, sw sw nw T. & St. L. sec 28, blk 146, elev 3132 ft, dr 3270 ft. H. H. Sides et al's Blackstone-Slaughter 1-a, near sec T. & St. L. sec 25, blk 130, sd 1850 ft. Stanley A. Thompson et al's Elsinore Cattle Co. 1, se se GC&SF sec 53, blk D, elev 2938 ft, dr 7280 ft. Union Oil & Mining Co.'s First Nat'l Bank 1, near nec H&GN sec 6, blk 9, elev 2410 ft, sd 1760 ft. **Presidio**—Brite Production Co.'s L. C. Brite 1, ne¼ GH&SA sec 113, blk 12, sd 5427 ft. **Reeves**—Frankley & Rice's W. A. Tunstill 1, ne ne nw T&P sec 10, blk 56, Tsp. 2, elev 2906 ft, top Rustler 190 ft, dr 435 ft. Lagoki Oil Co.'s Richards-Shaw 1, c n½ nw PSL sec 16, blk 59, dr 345 ft. Ohio Oil Co.'s Popham L&C Co. 1, nw T&P sec 18, blk 54, Tsp. 10, elev 3623 ft, ur 2380 ft. **Reagan**—Thomas Drl. Co.-E. H. Van Patton's J. O. Carr-Sun 1, near c ne sec 4, M. N. Hines sur, elev 2638 ft, fsh 2450 ft. Culbertson & Irwin, Inc.'s J. F. Nunn-Standard of Texas 1, c ne nw L&SV sec 26, blk B, sp and sd. **Runnels**—F. G. Beaudoin & Rex Cannon's H. Giesecke 1, blk 130, Jas. Hughes sur No. 227, sd 520 ft. J. W. McLean et al's E. H. Pflueger 1, Asa Clark sur, A-506, ur 1420 ft. Homer Price-A. E. Koener et al's J. C. Beddo 1, sub-div 51, D. Diaz sur, elev 1700 ft, top Palo Pinto lime 3498 ft, saturated lime 3515-3603 ft, pb to 3525 ft, acidized twice, flows 10 to 15 bbls oil daily. Stephenson & Jackson's W. J. Fowler 1, near ne ne sw E. T. Ry. sec 150, sd 1355 ft. **Schleicher**—J. M. Cooper-Cardinal Oil Co.'s Bert Page 2, c ne sw GH&SA sec 40, blk L, elev 2289 ft, top lime 5320 ft, dr 5417 ft. H. P. Opp et al's J. T. Jackson 1, nw ne T. C. sec 41, blk LL, elev 2353 ft, sd 100 ft. **Scurry**—H. H. Coffield & Guthrie, Inc.'s E. E. Spears 1, nw nw sw H&TC sec 130, blk 97, elev 2294 ft, top lime 1512 ft, sd 2861 ft. P. G. Moran et al's F. W. Hardee 1, nwc H&TC sec 99, blk 97, sd 1000 ft. S. B. Roberts & Co.'s C. M. Wellborn 1, c w½ sw H&TC sec 146, blk 25, dr 1725 ft. **Sterling**—John W. Sward et al's T. G. Brennand 1, se se ne H&TC sec 107, blk 2, elev 2535 ft, top anhydrite 918 ft, top Yates 1028 ft, top brown lime 1746 ft, top solid lime 1820 ft, dr 3010 ft. **Stonewall**—Stonewall Oil Co.'s Ima Harrison 1, nw ne nw H&TC sec 294, blk D, mim. Gen'l Crude Oil Co.'s J. D. Smith 1, sec H&TC sec 371, blk 2, elev 1958 ft, base red beds 2115 ft, top Dothan 3530 ft, top Noodle Creek 3640 ft, top Saddle Creek 3813 ft, sd in shale 4770 ft. E. C. Lawson et al's Ada Pumphrey-Gen'l Crude 1, Eli Chandler sur, elev 1661 ft, dry and abd 3534 ft. **Terrell**—Schermerhorn Oil Corp.'s H. P. Allison 1, c se¼ sec 22, blk B-2, CCSD&RGNG sur, elev 2649 ft, top Rustler 710 ft, top Blaine 1230 ft, dr 1310 ft. **Ward**—J. E. Fitz-Patrick, Frank T. Pickrell et al's H. B. Carr 1, c w¼ n¼ of H&TC sec 125, blk 34, elev 2645 ft, top Rustler 705 ft, top lower salt 3575 ft, dr 4460 ft; F. I. Dyer 1, w¼ n¼ H&TC sec 135, blk 34, elev 2709 ft, top Rustler 695 ft, base salt 3845 ft, top Delaware lime 5081 ft, sd 5085 ft. Mid-Continent Pet. Corp.'s Geo. Sealy-Magnolia 1, se se sw G&MMB&A sec 47, blk F, lcn.

EAST TEXAS BORDER COUNTIES

Marion—Vestal et al's (was Tom Bell), Carrie Moseley 1, D. Lane sur, ran electrical tester, woc td 2768 ft. Ark. Fuel Oil Co.'s Wallace Johnson 1, Alexander Johnson sur, elev 217 ft, top anhydrite stringer 5256 ft, top Henderson sand 5984 ft, tested est 30 mcf wet gas 5982-6002 ft, perf csg 6127-30 ft, tested sw, pb to 6125 ft, arr perf and test again. **Panola**—Texas Co.'s Claude Adams 1, Thos. Cox sur, 13⅜-in csg 579 ft, 9⅝-in csg 5940 ft, elev 287 ft, top lower Marine 7792 ft, dr 10,386 ft black shale. Walters et al's Phomplin 1, W. Moore sur, set 12½-in csg 68 ft, sd 220 ft. Petroleum Heat & Power Co.'s Frost Lbr. Co. 1, Jno. H. Gibson sur, lcn; J. W. Bird 1, Geo. Gallasty sur, lcn. **Sabine**—Hugo Allen et al's (was H. R. Smith), Mrs. Jenny Brook 1, Isaac Low sur, 7 mi ne Hemphill, 360 ac, strong sg 5654 ft, trying to uniodge drill stem, td 5654 ft. **Shelby**—C. L. Cope's Pickering Lbr. Co. 1, English sur, rur. Vaughn Prod. Co.'s Pickering Lbr. Co. 1; Brooks sur, no report. Shelby Oil Co.'s Windham 1, A. K. English sur, cored saturation 3397-3422 ft, testing, td 3422 ft; J. C. Windham 1, nwc Shelbyville townsite, lcn. A. R. Blount's Ethel Lovett 1, block 55, Shelbyville townsite, lcn. Redditt & Gray's Pickering Lbr. Co. 2, sec 237.8-ac tract, P. J. Loggins sur, 7-in csg cemtd at 2920 ft, sd 4225 ft, sg. Richards & Holloway's Ashberry 1, G. W. Michell sur, owdd, td 3405 ft.

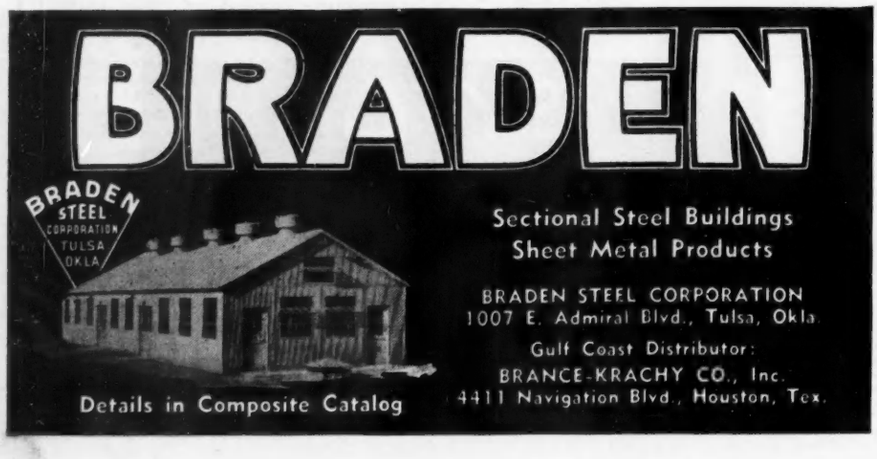
SOUTH TEXAS

CORPUS CHRISTI DISTRICT

Bee—Atlantic's Courtney 1, Kerr sur, dr 2700 ft. Devonian's Maley 1, Henry Coley sur, below surface casing. **Calhoun**—Hiawatha's Roamer 2, Ogsberry sur, shut down 6730 ft. **Goliad**—Sun's Shaper 1, Payne sur, drilling 3660 ft. **Hidalgo**—Harding's Card 1, Hidalgo Canal subd, spudding. Elmer Johnson's Daskam 1, por 45, shut down 4140 ft. Phillips' Flores 1, por 39, drilling shale 6477 ft. Wheelock and Collins' Temple Lumber 1, La Blanca and Llano Grande grants, drilling 5345 ft. **Jackson**—Magnolia's West Ranch 3-A, Ramon Musguiz grant, drilling 3985 ft. **Jim Wells**—Chew's Adams 1, T&NO sur, lcn. Howell's Mosser 1, Collins Farm Lots subd, dr 7335 ft. Howell's Stillwell 1, Bustillos sur, lcn. Howell's Wallis & Hawkins 1, Flores sur, dr 6050 ft. Humble's Adams 1, Lopez gr, cored 5686-89 ft sand gas odor, 5710-12 ft sand with oil odor, 5712-15 ft, sand with no show, 5715-17 ft, recovered 6 inches of Martin sand with oil show, attempt dst seat leaked. Humble's True 1, Garza grant, lcn. Magnolia's Garcia 1, La Anima Sola gr, spud; Martin 1, dr 4615 ft. Prett & Browning's Stillwell 1, Collins Farm Lots, dr 4380 ft. Schwab's Boehm 1, Montemayor gr, lcn. Shell's Von Blucher 1, Best sur, dr 6300 ft. Smith & McConnaid's Rooney 1, Casa Blanca gr, sp. Transwestern's Duniap 1, dr below 2116 ft. **Karnes**—Fomax' Pfluger 1, Sequin sur, mim. **Kleberg**—Pure's State of Texas 1, Laguna Madre, dr 9100 ft. **Lavaca**—McCord's Russek 1, Reynolds sur, below sur csg. Crosby Drlg. Co.'s Graff 1, Jack sur, mim. **Live Oak**—Adair's Schultz 1, Pearce sur, sd 484 ft, reprg rig. Gravis' Minnetex 1, Live Bee subd, laying wtr line. Holland's Wallace 1, West subd, ru heavier rig to re-dr 200 ft. **Live Oak**—Holland's West Ranch 2, Ragland sur, prep re-dr 2616 ft. N-P Oil Co.'s Griffith 1, Poltevent sur, sd 905 ft. Richardson's Reagan 1, Docharty sur, dr 450 ft, Wallace & Jones & Wiggens' Burrows 1, Smith sur, dr 1215 ft sdtr hole. **Nueces**—Seaboard's Chapman 7, El Rincon de Corpus Christi gr, mim. **Refugio**—Allen's Rooke 1, Aldrete gr, td 4568 ft, wsh down to td. **San Patricio**—Mills Bennett's Ivey 1, Pauls subd, td 5345 ft, 7-in csg 5338 ft, oil sand 5337-45 ft. Easterwood's Smith 1, Pauls subd, lcn.

LAREDO DISTRICT

Duval—Magnolia's Duval Ranch 1, sec 83, dr 2630 ft. Palmer's Gruy Est. 1, Hayes Wells sur, dr below 1375 ft. St. of Texas' Garcia 1, Concepcion gr, coring below 6582 ft, cored sand streaks with oil odor 6572-82 ft. Wagner's Lampe 1, sec 497, sp. **Jim Hogg**—Hamilton's Holbein 1, Holbein subd, ru. Humble's Bass 2, San Rafael gr, dr 3520 ft. **McMullen**—Allbright's Nueces Land & Livestock 1, BS&F sur 119, sp. Boysen & Jones' Nueces Ld. & L., Williams sur No. 229, sd 780 ft. Crow & Sturn's Smith & Leuschner's Zumwalt sur, lcn. **Starr**—Giblin's Guerra 1, por 69, dr below



sur csg. Graham's Gutierrez 1, Juris of Carmargo, cor sand 2598-2604 ft, dst no details. Hagan & Stewart's Salinas 1, below sur csg. Hall's Hall 1, por 70, dr 100 ft. Magnolia's Fee-Guerra 1, Santa Cruz gr, sp. Sun's Garza 1, dr 1525 ft, dst 1434-37 ft, 285 lbs press, 30 ft mud 6 min, dst 1437-43 ft, rec 90 ft sw, 170 lbs press 15 min; McKinney 1, Smith sur No. 242, dr 2425 ft. Zimmerman's Starr Co. Cattle, Porc 89, cor 2265 ft. **Webb**—Nicholson's Nicholson 1, C.C.S.D.&R.G.N.G. sur, dr 3250 ft. Red Bank's Yeager 1, sec 581, dr 425 ft. **Zapata**—Transwestern's Trevino B-19, sec 65, lcn.

SAN ANTONIO DISTRICT

Atascosa—Chapman Minerals & Altgelt's Gipson 1, Garza gr, dr ahead 1900 ft. Western Gulf's Venegas 1, de la Garza gr, dr 2415 ft. **Bastrop**—Teas' Grizzard 1, Graham League, dr 2625 ft in new hole. **Bexar**—Noake's Oppenheimer 1, Miller sur, td 800 ft, wocs. Philtop's Patton 3, td 600 ft, fsg. **Burleson**—Peerless' GC&SF RR Co. 1, Lastely League, sd 2028 ft. **Caldwell**—Artz's Campbell 1, Martinez sur, dr 1565 ft Dale lime, sli oil show, apparently missed serp. Luling's Carter 4, Hinds sur, testing 3300 ft, 5½ in at 2317 ft. Tinkle Blackwell 2, Roe sur, td 2312 ft, ru cable tools, dr to Edwards lime. **Frio**—Humble's Schley 1, sur 174, ru. Smith S. A. Jt. Stk. Lnd. Bnk. 1, G. B. C. N. R. W. C. sur No. 1, dr 3585 ft. **Guadalupe**—King's Rosenbrook 1, Duran sur, dr 425 ft. Marosis' Maierhofer 2, Peters sur, dr 512 ft. **Kendall**—Millican & Norman's Werner 1, Torrey sur No. 781, cor below 450 ft. Reed's Marquart 1, Traviesso sur, sd repairs 335 ft. **Kimble**—Dawson & Son's Wilkinson 2, Brooks & Burleson sec 24, lcn. Phillips' Mudge 1, CCSD&RGNG sur, dr below 1975 ft. Plateau's Bolt 1, Jones sur No. 42, dr 1025 ft, 10 in at 900 ft; Hunger 1, Dufner sur No. 43, dr 1450 ft. **Kinney**—Rose's Gaebler 1, Soto de Beales sur, mim. **Lee**—Pederson's Brown 1, Hudson sur, dr 2310 ft. Tarver's Lawhon 1, Nantz sur, dr 3020 ft. **Maverick**—Lockhart's Asbrook 1, sur 83, cor 2328 ft. Wellington's Chittim Est. B-1, B. N. RR sur, dr 920 ft. **Medina**—D. K. J. Oil Co.'s Burell 1, Gage sur No. 395, td 2046 ft, trying to cut off wtr. Ziegler's Saathoff 1, Eickhorn sur 231, fsg 905 ft; Weimers sur 274, dr ahead 815 ft. **Travis**—Priest's Mozach 1, Leavy sur, dr 860 ft. **Williamson**—Anderson's Teichelman 1, Jett sur, lcn. Coffield's Poe 1, Owen sur, sp. **Wilson**—Stapper's McDaniel 1, Manahaca sur, dr 3020 ft.

TEXAS GULF COAST

Brazoria—Glenn H. McCarthy's Street 1, Pearland prospect, D. H. M. Hunter sur, dr shale below 3100 ft. W. C. Neville et al's Houston Farms Dev. Co. 1, Rattlesnake Mound prospect, Perry & Austin sur, dr shale 6915 ft. Sterling's Kramer 1, flank test at Stratton Ridge, T. W. Grayson sur, woc 3150 ft. Texas Co.'s Jones 1, sw of production at Manvel, H. & T. B. No. 64, abn 7641 ft. **Galveston**—Sun's Cade 1, Bolivar prospect, A. Dickson sur, running electrical logging device 8259 ft. **Grimes**—Hubert Holt's Greer 1, Carlos area, no report. **Harris**—S. G. Harrison et al's Lafferty Estate 1, sw of Clinton, dr shale below 4000 ft. **Jefferson**—Humble's State B-6, in Gulf of Mexico, abn 2134 ft. **Liberty**—Texas Co.'s Page 1, West Hardin prospect, J. Hanley sur, abn 8050 ft. **Matagorda**—Ohio Oil Co.'s Cornelues 1, North Markham prospect, P. C. Yarborough sur, dr shale 3509 ft. **Montgomery**—W. L. Todd's Martin 1, s of Montgomery, M. Landrum sur, lcn. **Newton**—Republic's Sabine Tram Co. 1, Northwest Starks prospect, I. Garner sur, ru. **Polk**—Jack Frazier's S. Bergman 1, Goodrich area, A. Veisca sur, abn 4211 ft. **Tyler**—Chapman Mineral's Angeline County Lbr. Co. 1, Emilee area, J. Conn sur, spudded. **Washington**—Mt. Selman Oil Co.'s Pohlmeyer 1, ne of Brenham, A. Kuykendall sur, lcn.

ROCKY MOUNTAIN STATES

COLORADO

LaPlata—Nick Spatter's Bryce 1, se sw sw 31-33n-9w, dr 1500 ft, so at 1285 ft. **Mesa**—Continental Oil Co., California Co., Amerada Petroleum Corp.'s Miller 1, sw sw nw 36-8s-91w, dr 6065 ft. **Moffat**—MacKinnie Oil & Drilling Co.'s (formerly Morapos Petroleum Co.), Coles 1, se nw se 1-3n-92w, resuming at 2750 ft. **Park**—South Park Oil Co.'s Lemarr 1, ne ne se 34-11s-75w, dr 6044 ft. **Prowers**—Continental Oil Co.'s Ruby 1, cne nw 31-21s-44w, washing over last 100 ft pipe with td 5065 ft. **Pueblo**—Eden Oil & Gas Co.'s Jearse Creek Land & Cattle Co. 1, sw se 29-19s-64w, dr 100 ft. **Rio Blanco**—Buford Oil Co.'s Government 1, cne ne 20-1n-91w, dr 2560 ft shale and anhydrite. **Routt**—Moore, Craig et al's Irwin 1, csw ne 33-7n-75w, abnd crooked hole 700 ft, skidded rig few feet; Irwin 1-X, spdg.

MONTANA

Teton—Gulf States Oil Co. and Zodiac Oil Co.'s Wallenstien 1, sw sw sw 5-27n-5w, dr 3000 ft.

NEBRASKA

Garden—Bergman & Bull's 1, 12-16n-42w, Lewellan area, ruct. **Sioux**—Union Oil Co.'s Buckley 1, 15-28n-55w, co 4576 ft after successfully fishing drill stem that parted just below Kelly and jammed under surface string with td 6843 ft. Felmount Oil Corp.'s Kinion 1, csw ne 28-27n-55w, dr 5000 ft. **Scotts Bluff**—Houston Petroleum Corporation's Judd 1, nec ne ne 12-55n-57w, ruct.

WYOMING

Niobrara—W. A. Maupin's Berggren 1, nw 23-35n-63w, dr 1360 ft. **Sublette**—Frontier Petroleum Co.'s Government 1, se se sw 1-28n-114w, dr 1500 ft.

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Larkin Packer Company, St. Louis, Missouri, has recently published an attractive 12-page bulletin illustrating and describing its complete line of pumping equipment.

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Wyatt Metal & Boiler Works, Houston, has just published a new stock list of various products. This pocket-size catalog lists all items regularly carried in stock, and in addition shows illustrations of equipment which can be built to specification.

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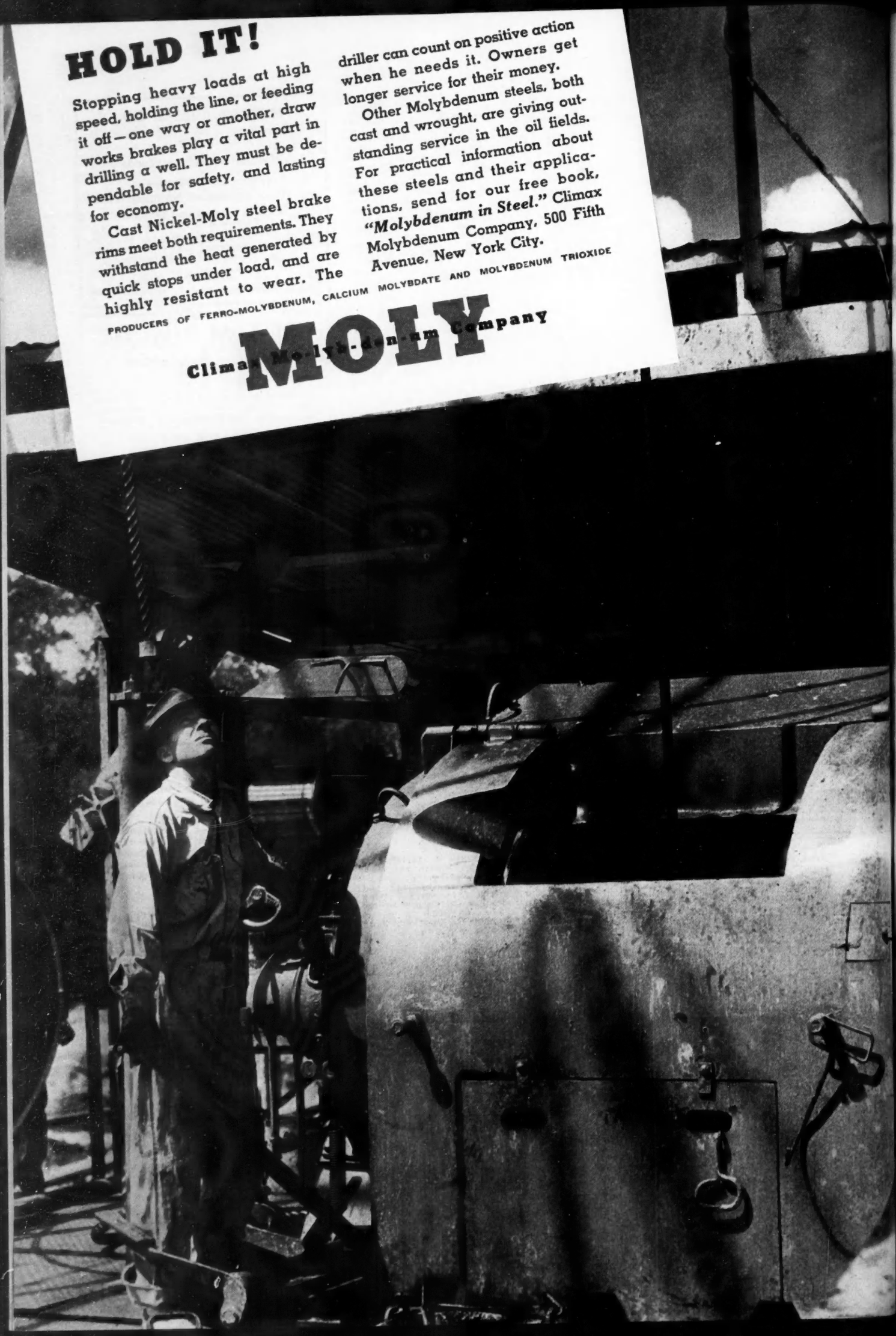

HOLD IT!
Stopping heavy loads at high speed, holding the line, or feeding it off—one way or another, draw works brakes play a vital part in drilling a well. They must be dependable for safety, and lasting for economy.
Cast Nickel-Moly steel brake rims meet both requirements. They withstand the heat generated by quick stops under load, and are highly resistant to wear. The driller can count on positive action when he needs it. Owners get longer service for their money.
Other Molybdenum steels, both cast and wrought, are giving outstanding service in the oil fields. For practical information about these steels and their applications, send for our free book, "Molybdenum in Steel." Climax Molybdenum Company, 500 Fifth Avenue, New York City.
PRODUCERS OF FERRO-MOLYBDENUM, CALCIUM MOLYBDATE AND MOLYBDENUM TRIOXIDE
Climax Molybdenum Company
MOLY

NEW PRODUCTS FOR THE FIELD
Machinery • Tools • Equipment

DECK FLOAT CONTROLS
Black, Sivalls & Bryson, Inc.

Black, Sivalls & Bryson, Tulsa, has recently placed on the market a new tank deck float control which controls the water level on wood tanks, eliminating the necessity of this job being executed or neglected by workmen.

Black, Sivalls & Bryson Tank Deck Float

The new device automatically releases sufficient water to offset evaporation or other loss, and maintain the water level at any desired depth. It works on the same principle as the float valve in the tank on the lavatory.

The tank deck float is easily installed and requires little or no attention. The manufacturer states that, while workmen may neglect to check tank top water conditions or be too busy to attend to the job, the tank deck float performs this function automatically.

VERTICAL GAS ENGINE
Worthington Pump & Machinery Corporation

Worthington Pump & Machinery Corporation, Harrison, New Jersey, recently placed on the market a new four-cycle vertical gas engine, known as type LPE. With the exception that frame extensions and running gear for the compressor cylinder have been obmitted, the units are similar to the LCE gas engine compressor unit, all component parts being interchangeable between them.

The new engine is of the multi-cylinder, trunk-piston type with cylinders of the L-head design arranged in line. The entire unit is totally enclosed and has full circulating pressure lubrication throughout.

The straight-line arrangement of cylinders provides utmost accessibility and permits equal intervals between power impulses. This latter feature produces the most uniform turning effort and smoothest operating with a very small flywheel. A single magneto can be used for all cylinders.

Units are available in 4-, 6- and 8-cylinder arrangements, conservatively rated at 180, 270 and 360 horsepower when running at 400 r.p.m.

BOTTOM HOLE SAMPLER
Walter Ruska & Company

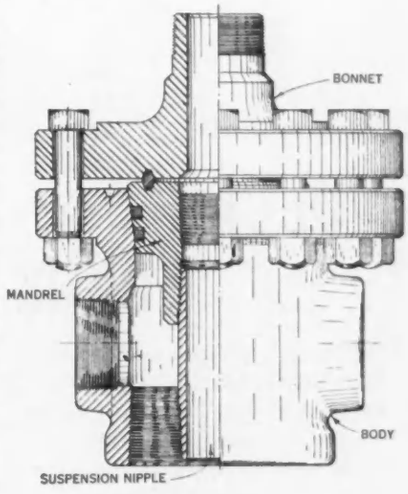
Walter Ruska & Company, 2332 Bellaire Boulevard, Houston, has recently developed a new bottom-hole sampler which takes oil and gas samples under pressure from the bottom of a well.

To take a sample, the instrument is lowered into the well on a wire line until the desired depth is reached. By snapping the line the valves of the sampler close, and the sample, inclosed in a steel chamber, is brought to the surface for examination and analysis in the laboratory. The sampler is recommended for pressures up to 5000 pounds per square inch. It takes a sample of approximately 250 c.c. The instrument measures 1¼ inches O.D. and is 5½ feet long.

The sampler is made of stainless steel throughout. Valves, valve seats and wire line heads are hardened. The sampler is strong, and every reasonable precaution is taken in its manufacture to produce a pressure unit that will withstand conditions in oil well sampling. The actual bursting strength of the sampling chamber is above 30,000 pounds. Threads on the sampler are standardized and allow the joining of several well testing units with the sampler. A thermometer joint with maximum reading thermometer can be supplied to measure the temperature at which the sample is taken.

TUBING HEADS
The National Supply Company

The National Supply Company, Toledo, Ohio, has recently developed a type LH series tubing heads in which the weight of the tubing assists in sealing off the tubing hanger. When the casing pressure is not too great, therefore, to overcome the weight of the tubing, the Christmas tree can be removed and stripper equipment installed for moving tubing under pressure. The Christmas tree is assembled on the bonnet, which can be flanged to the body without rotation.



LH-3 TUBING HEAD

The type LH series is made in three types. The type LH-3, as illustrated, has a mandrel hanger with a bolted on bonnet. The type LH-3D is of the slip suspension type, having a stripper rubber at the lower end of the tubing hanger and is particularly convenient in setting tubing packers. The LH-3F is a mandrel hanger type head for lower pressures with split flanges to assist the weight of the tubing in sealing off the tubing hanger.

GAS MASKS
Acme Protection Equipment Company

Acme Protection Equipment Company, 3616 Liberty Avenue, Pittsburgh, announces the development of full vision gas masks Nos. 4 and 4A for organic vapors. These masks have now officially been approved by the U. S. Bureau of Mines.

An exclusive feature of these new masks is the full vision safety glass lenses which permit the wearer to see the same as when not wearing a mask. Another important feature is the dead air check valves on the outlet ends of the fresh air ducts. These valves automatically open and close upon inhalation and exhalation, and prevent the accumulation of exhaled breath in the fresh air ducts.

Acme full vision gas mask No. 4A.

A light weight, all rubber face piece, fully molded and cured to master face fitting proportions, provides utmost comfort to the wearer. There are no

"VULCAN *Boll-Weevil*" TONGS

Williams' "Vulcan Boll-Weevil" Tongs are REVERSIBLE IN ACTION. They "make-up" or "break-out" without either unhooking the chain, or removing the tool from the pipe. That spells speed on flat pipe work and makes them particularly efficient in trenches. Only 6 parts, so designed that breakage and wear are minimized. Two bolts secure the jaws; they cannot spread. "I-Beam" handle means extra strength and rigidity. Four sizes for ¾" to 12" pipe.

also "BOLL-WEEVIL ZEPHYR"

Greater strength with much less weight. **Same structural and utility features as regular "Boll-Weevil," but heat-treated and equipped with Alloy "SUPERCHAIN" . . . stronger and much lighter, capacity for capacity. 3 sizes, for ¾" to 12" pipe.**

J. H. WILLIAMS & CO.
211 Spring Street, New York

Headquarters for: Drop-Forged Wrenches (Carbon and Alloy), Detachable Socket Wrenches, Reversible Ratchet Wrenches, "C" Clamps, Lathe Dogs, Tool Holders, Eye Bolts, Hoist Hooks, Thumb Nuts and Screws, Chain Pipe Tongs and Vises, etc., etc.

WILLIAMS
SUPERIOR DROP-FORGED TOOLS

rivets, threads or adhesive tape pads to irritate the face, and the head harness buckles are incorporated in such a way as to eliminate uncomfortable pressure on the wearers face and forehead.

GEARED VALVE

Hamer Oil Tool Company

Hamer Oil Tool Company, Long Beach, California, announces a new, heat treated, all-steel, round hole, full-opening geared plug valve that is particularly suited to multiple zone production.

Hamer geared plug valve.

The geared feature of this valve permits opening very easily and slowly, but with tremendous power, and positively eliminates sticking. These valves have been used successfully on Christmas trees and in slush pumps on new wells, and can be transferred from one to the other and back again as often as desired, providing maximum utility. They are available in all standard sizes, in both 4500 and 6000 pound test, with or without the geared feature.

OIL AND WATER EXTRACTOR

Spray Engineering Company

Spray Engineering Company, 173 Central Street, Somerville, Massachusetts, has recently developed a new oil and water extractor which has been designed to keep compressed air lines free from oil and moisture. It has no moving parts or packing and requires no adjustments. An automatic drain valve prevents the accumulation of condensate in the reservoir at the bottom of the extractor shell.

Elimination of moisture and free oil is obtained by the cooling effect of a small volume of circulating water passing through a cooling coil, by a reduction in the air velocity through the extractor, and by changes in the direction of the air flow. Oil and water are collected on a series of baffles in the air stream, deposited in the reservoir and automatically drained off.

GLOBE VALVE

Crane Company

Crane Company, 836 South Michigan Avenue, Chicago, has designed a new, brass, globe valve (No. 237) for air installations where quick-opening, quick-closing valves are needed. Among its features are an apron on the wheel to protect the upper part of the valve from rough handling and a brass screen in the union connection at the valve inlet to keep out foreign matter. It is made in ¾- and 1-inch sizes and is recommended for 150 pounds air working pressure. The composition disc can be quickly and easily renewed when necessary. A spring maintains a constant load on the stuffing box packing.

The valve has a non-rising stem which opens or closes in about a three-quarter turn. The stem rotates but does not rise, being held from vertical movement by the shoulder which rests between the bonnet and stuffing box. Turning the wheel raises or lowers the disc holder, which is held from rotary movement by two vertical guides, one on either side of the holder.

This Week with the Industry's EQUIPMENT SUPPLIERS

Fred E. Cooper Plans Opening London Office

Fred E. Cooper, Tulsa, is making plans for opening an office in London, England, which will have charge of distribution of oil field equipment in Europe and Asia. Harold J. Cooper, who spent a year in South America for the Tulsa manufacturer, sailed from New York last week to take charge of the new office.

McGill Appoints Mid-Continent Representative

Thomas W. Crosby, formerly with Wheatley Brothers, has been appointed district representative in the Mid-Continent for McGill Manufacturing Company, Valparaiso, Indiana, (bearing division), with headquarters in Tulsa. Crosby will return from the McGill factory on September 1, to take charge of the sales for the McGill bearings in the territory from Houston to Kansas City.

The Continental Supply Company To Build Warehouse at Houston

The Continental Supply Company soon will ask bids for construction of a large assembling plant, warehouse and offices on an 11-acre tract at the corner of Navigation boulevard and Industrial Way, Houston. Racks have already been built and pipe stacked on the 3-acre storage yard maintained in connection with the proposed plant. The main part of the proposed building consists of a structure 60 by 360 feet, plus a lean-to 25 by 130 feet on either side. The front of the building is an air-conditioned 2-story affair 30 by 60 feet, having a display room on the ground floor and offices above. Provision is made for a dock on the Houston Ship Channel, which the property faces, so that pipe and heavy equipment may be barged down the Ohio and Mississippi rivers to New Orleans, and thence by Intracoastal Canal to Houston. It may then be loaded on motor truck or rail car for transfer to the storage warehouse or for delivery from barge to consumer. The structure will be all steel, except where face brick and ornamental Cordova stone are used for front and sides.

Morton Higgs Heads Gulf Coast Sales for Lane-Wells

Morton T. Higgs has been made division sales manager of The Lane-Wells Company Gulf Coast division, according to an announcement by M. E. Montrose, Gulf Coast division manager for the concern.

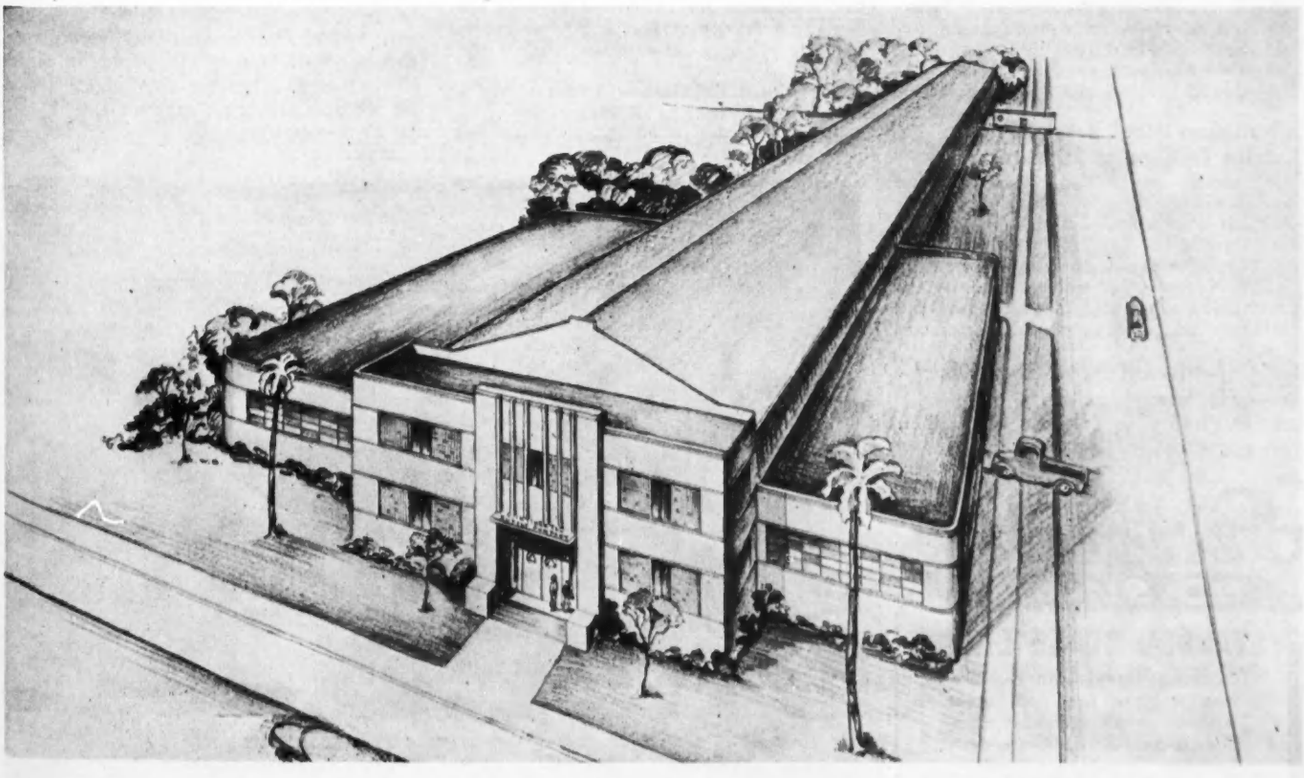
Other personnel changes made in The Lane-Wells Company's Gulf Coast division include the following promotions: D. B. McCutchen to division operating superintendent; G. E. Matter to division foreman of the underground survey department; C. W. Barnes to divison foreman of directional drilling department; and P. M. Terrill to division credit manager.

The company recently added the directional drilling and well surveying departments to its gun perforating and other technical service departments.

MORTON T. HIGGS
Now with The Lane-Wells Company

Byron Jackson Company Transfers Personnel

The broad market opened up to the Pump Division of Byron Jackson Company by the new Submersible, close-coupled, deepwell turbine pump, as well as a considerably increased volume of business in both general and special-



Proposed plant for The Continental Supply Company at Houston. Fronting on Navigation Boulevard the property extends back to the Houston Ship Channel where private docks handle barge shipments through the Intercoastal Canal direct from Eastern mills.

LYNN SAWYER

ED UPTON

J. J. O'CONNOR

ized industrial fields, has occasioned recent transfers and changes of personnel.

Lynn Sawyer, formerly in charge of the district office at Fort Worth, has been transferred as district manager of the New York office.

Ed Upton, formerly connected with the New York and Chicago offices, assumes charge of the Fort Worth office.

Byron Jackson Co. announces the opening of a branch office of the Pump Division at 407 South Dearborn Street, Chicago, in charge of J. J. O'Connor.

Atlas Supply Company to Handle Muskogee Iron Works Equipment

Muskogee Iron Works and Atlas Supply Company have completed arrangements whereby the pumping equipment manufactured by the former will be sold and serviced by the latter.

Columbian Steel Tank Opens District Offices at Houston

Columbian Steel Tank Company of Kansas City recently completed construction of Gulf Coast district offices and warehouse at 3705 McKinney, Houston, placing E. W. Ayres, formerly with Nowery J. Smith Company, in charge of sales and service for the Louisiana and Texas coastal districts.

M. O. Johnston Now Controls Gas Lift Corporation

M. O. Johnston has recently taken over a controlling interest in and the management of Gas Lift Corporation, Dallas, Texas, manufacturers and distributors of Bryan Flow Valves, Bryan Drop Valves, and Bryan Bottom-Hole Gas Lift Pump. It is contemplated that the headquarters of the corporation will be moved to Houston in the near future. There will be no change in the active personnel.

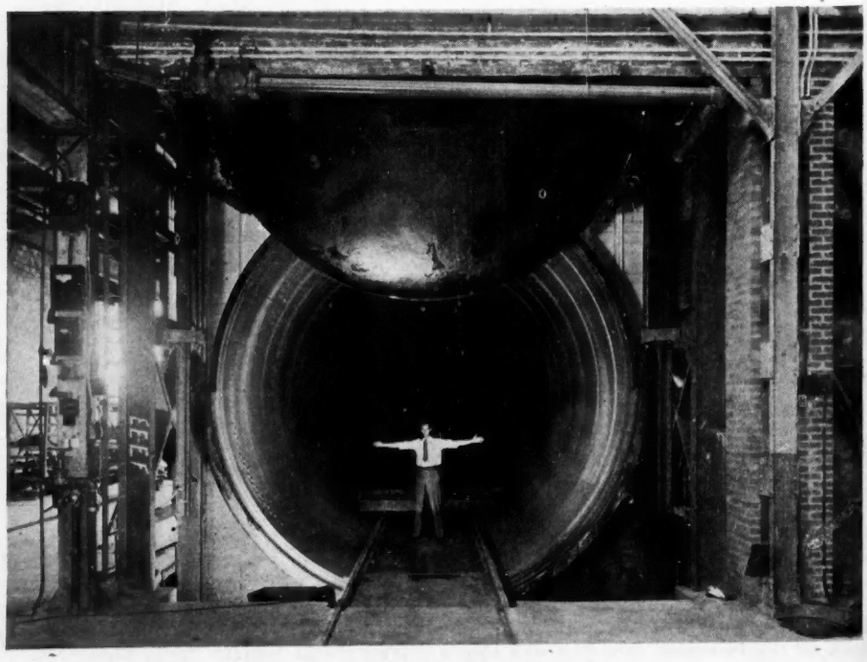
Goodyear Installs Big Unit for Rubber Lining Steel Tanks

As a result of the increasing demand for its Plioweld rubber lining material for protection of equipment exposed to the corrosive effects of acids, alkalis and fumes, The Goodyear Tire & Rubber Company has installed in its Plant No. 3 at Akron, Ohio, a 90-ton curing heater, with 17-ton door inside the shell.

Weighing 107 tons and measuring 45 feet long, 15 feet in diameter, the great heater will be used for vulcanizing Plioweld installations to various types of pressure and storage tanks, ventilating fans and equipment, pipes for abrasive conveyor and acid transmission systems, even to railroad tank car shells which are Ploweld lined to facilitate hauling of various chemicals.

The curing heater is equipped with steel railroad tracks upon which special trucks will be used to carry various products into it for the curing process during which the heavy steel door is automatically sealed to withstand steam at 75 pounds per square inch.

In the Plioweld process a protective layer of rubber, varying in thickness depending upon the type of service, is applied to the cemented metal surface to be protected, then vulcanized into the tank. The vulcanizing completes the bond of rubber and steel much in the same manner as two metals may be welded together, making the installation permanent.



Goodyear's Rubber-Steel Curing Heater

Standco
NO-SMOKE
STANDCO BRAKE LINING
Nothing novel—no bunk—but it gets the job done without scoring brake rims. See page 1940, Composite Catalog.
Standard Brake Lining Co.

Squeaks from the Bull Wheel

Views

Overly conscientious, when she engaged a new maid she asked as many questions as are asked in a civil service examination.

"Have you," she asked sternly, "any religious views?"

"No, ma'am, I haven't," answered the girl, "but I've got some dandy snapshots of Niagara Falls and the Great Lakes."

Just How?

Mother: Does my boy like to study?

Teacher: He likes to do nothing better.

Two to One

The batter took two cuts at the first two pitches, and let the third one go by.

"Strike three—you're out," called the umpire.

The batter was indignant: "You missed that one, ump."

"Well, you missed the other two. You're still one up on me."

Modernism

"How is Hennery gettin' along with school, Eph?"

"Not so well, Garge. They're learnin' him to spell taters with a 'p.'"

Seasons Mixed

"A moth leads an awful life."

"How come?"

"He spends the summer in a fur coat and the winter in a swimming suit."

Not Magic

The sleight-of-hand performance was not going very well.

"Can any lady or gentleman lend me an egg?" asked the conjurer coming down to the footlights.

"If we'd 'ad one," shouted a man in the audience, "you'd 'ave got it long before this."

And What About Inflation?

"What are the properties of heat and cold?"

"Heat expands and cold contracts."

"Correct. Give an example."

"In summer when it's hot the days are long, and in winter when it's cold the days are short!"

Arithmetic

The school teacher was endeavoring to drum into her small pupils the fundamentals of arithmetic.

"Now, listen," she said rather desperately, "in order to subtract, things have to be of the same denomination. This is what I mean. Now, you couldn't take three apples from four bananas, or six plums from eight peaches. It must be three apples from four apples, and six plums from eight plums, and so on. Do you understand now?"

The majority of children seemed to grasp the idea. One chubby-faced youngster very near the bottom of the class, however, raised a timid hand.

"Please, teacher," he said, rather timidly, "you can take three quarts of milk from two cows."

Worth the Price

"Gentlemen of the jury, you have heard the facts of both sides. Mr. Vernon had a public fight with Mr. Goodwin. Mr. Vernon had in his possession at the time one butcher knife, a club and a shovel. Mr. Goodwin had on his person one hatchet, an iron wrench and an iron bar. Both men plead 'not guilty,' each asserting a plea of self-defense. Have you reached a verdict?"

"We have, your honor."

"And that verdict—"

"We, the jury, would have cheerfully paid $1 per man to have seen the fight."

Poetic Justice

"Do ye ken who ye had wi' you the other night?"

"Nae, but he were a pleasant man."

"It was Tennyson, the poet."

"An' wha may he be?"

"Oh, a writer of verses, sich as ye see i' the papers."

"Hoot! To think o' that! jeest a public writer and I gied him ma best bedroom!"

Camera—Action

"Did they take an X-ray photo of your wife's jaw at the hospital?"

"They tried to, but they got a moving picture."

Cool

"I have played all the newest records. Have you decided on one, or do you want to hear some more?"

"No, thanks—I see it has stopped raining now."

A Nazi Joke

It appears that Dr. Schacht visited Montagu Norman, governor of the Bank of England, and requested a loan of £50,000,000.

"What is your security?" asked Mr. Norman.

"Well, underground we have our unexploited iron and coal, and above ground, as a guarantee for this collateral, we have our Fuehrer."

"If you could reverse the conditions I might be able to accommodate you," replied the governor of the bank.

Not So Sure

The wife had run away to her mother. She returned suddenly and said to the maid: "Mary get a bottle of wine from the cellar. My husband and I must celebrate my return."

Maid: "But won't it be too much for him, madam? He has already had two bottles to celebrate your going away."

Horticultural

Mrs. Newrich was fond of flowers and especially liked the salvia, but was not very reliable in getting the names right. She was giving directions to her gardner. "On this side of the walk," she said, "I want you to put out some salivas. Now what would you suggest for the other?"

"Well, madam," answered the gardener solemnly, "maybe it would be a good idea to put some spittoonias there."

The powerful suction action of the MILLER Sand Pump cleans-out quickly at small cost the sand and sediment that holds back production.

The MILLER is made in diameters of 2½, 3, 3½, 4, 4¼, 5, 5½, 7 and 9 inches and lengths of 20, 25 and 30 feet. 5/32-inch wall thickness in REGULAR Type. ¼-inch wall tubes HEAVY Type Sand Pumps.

INTERCHANGEABLE BOTTOMS
To Meet Every Condition

- **BAILER BOTTOM** — With the Bailer Bottom installed the MILLER is quickly changed to a Bailer giving you a combination of either Bailer or a Sand Pump in one tool.
- **SAND BOTTOM** — Used when tools are run and when well is shot to quickly remove loose material.
- **STAR BOTTOM** — Used for cutting the sand loose.
- **CHISEL BOTTOM** (In Pump) — With this bottom tightly packed sand can be easily broken in small pieces so it can be picked up in the pump.

Write for Descriptive Folder and Price List

See Page 1445 COMPOSITE CATALOG

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NO. 1370340
NO. 1523908
NO. 1767300
NO. 1862028
NO. 1866928
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MILLER Sand Pump Co.

General Offices and Shop, Box 4516
OKLAHOMA CITY, OKLA., U. S. A.

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SAPULPA, OKLA. and KILGORE, TEX.

FOR SALE BY SUPPLY STORES EVERYWHERE

INDEX TO ADVERTISERS

	Page
J. S. Abercrombie Co.	—
Abercrombie Pump Co.	—
Ajax Iron Works	—
Allsteel Products Manufacturing Co.	—
Alten's Foundry & Machine Works	—
American Assn. of Petroleum Geologists	—
American Cable Division	—
American Cast Iron Pipe Co.	—
American Chain & Cable Co.	—
American Hammered Piston Ring Division of Koppers Co.	—
American Iron & Machine Works Co.	Fourth Cover
American Meter Co.	—
American Roller Bearing Co.	—
American Sand-Banum Co.	—
American Steel & Wire Co.	—
Athey Truss Wheel Co.	—
Atlas Ball Co.	—
Atlas Supply Co.	—
Axelson Manufacturing Co.	—
Baash-Ross Tool Co.	—
The Babcock & Wilcox Tube Co.	—
Baker Oil Tools, Inc.	3
Baldwin-Duckworth Chain Corp.	4
Bantam Bearings Corp.	—
Baroid Sales Co.	—
William M. Barret, Inc.	79
Bartlett-Hayward Division of Koppers Co.	—
Beaumont Iron Works Co.	—
Bethlehem Steel Co.	—
Black, Sivalls & Bryson	—
Blackstone Hotel	—
Braden Steel Corp.	78
Bradford Motor Works	—
The Brewster Co.	—
The Bridgeport Machine Co.	40
Broderick & Bascom Rope Co.	—
Buckeye Traction Ditcher Co.	—
The Buda Co.	—
A. M. Byers Co.	10
Byron Jackson Co.	—
Jo H. Cable	79
Cameron Iron Works	—
Carnegie-Illinois Steel Corp.	—
J. I. Case Co.	—
Caterpillar Tractor Co.	—
The Cavins Co.	—
Chain Belt Co.	—
Chiksan Oil Tool Co.	—
Clark Machine Co.	—
Climax Molybdenum Co.	80
Columbian Steel Tank Co.	—
Continental Oil Co.	—
The Continental Supply Co.	—
Fred E. Cooper Co.	—
The Cooper-Bessemer Corp.	—
Core Laboratories, Inc.	—
Crane Co.	—
Cummins Engine Co.	—
W. H. Curtin Co.	—
Darling Valve & Manufacturing Co.	—
The Dayton Rubber Mfg. Co.	—
Deckard Manufacturing Co.	—
Dedman Foundry & Machine Co.	—
DeWitt Operated Hotels	—
Diamond Chain & Manufacturing Co.	—
Dowell Incorporated	—
S. R. Dresser Manufacturing Co.	—
E. I. du Pont de Nemours & Co.	—
Eastman Oil Well Survey Co.	—
Economy Electric Lantern Co.	—
Elliott Core Drilling Co.	—
Elliott Manufacturing Co.	—
Enardo Foundry & Manufacturing Co.	73
The Fafnir Bearing Co.	—
Geo. E. Failing Supply Co.	—
First National Bank, Houston	—
First National Bank & Trust Co. of Tulsa	—
Fluid Packed Pump Company	—
Foote Bros. Gear & Machine Corp.	—
Ford Motor Co.	—
Fort Worth Clearing House Association	—
The Fort Worth Laboratories	79
The Benjamin Franklin Hotel	—
Franks Manufacturing Corp.	—
Frick-Reid Supply Corp.	—
Gardner-Denver Co.	—
The Garlock Packing Co.	69
General Electric Co.	—
General Motors Corp.	—
General Power Co.	—
Geological Scientific Service Co.	—
Geophysical Service, Inc.	—
H. P. Gott Manufacturing Co.	72
Grant Oil Tool Co.	—
Gray Tool Co.	—
Green Head Bit & Supply Co.	—
The Guiberson Corp.	31
Gulf Coast Machine & Supply Co.	—
Gulf Envelope Co.	—
Gulf Publishing Co.	4, 6, 71, 77 and 79
Gulf States Utilities	—
Gustin-Bacon Co.	—
Halliburton Oil Well Cementing Co.	—
Hardway & Cathey	79
Harnischfeger Corp.	—
Haynes Stellite Co.	—
Hazard Wire Rope Co.	—
The Hercules Power Co.	—
Hercules Supply Co.	—
Hoard Exploration Co.	—
Hughes Tool Co.	First Cover
Hunt Tool Co.	—
Hyatt Bearings Division	—
Hydrauger Corp.	—
Independent Exploration Co.	—
The Inferno Co.	73
Ingersoll-Rand Co.	—
International Derrick & Equipment Co.	—
International Harvester Co.	—
The International Nickel Co.	27
International Supply Co.	—
Iron & Steel Products, Inc.	79
Jarecki Manufacturing Co.	—
Jeffrey Manufacturing Co.	—
Jensen Brothers Manufacturing Co.	68
Johns-Manville	—
The S. M. Jones Co.	—
Jones & Laughlin Steel Corp.	Third Cover
The Kennedy Valve Manufacturing Co.	—
Kerotest Manufacturing Co.	—
Kesler Manufacturing Co.	—
Keuffel and Esser Co.	—
Keystone Driller Co.	—
M. M. Kinley Co.	—
Kinzbach Tool Co.	—
Koppers Co.	Insert, 53
Kropp Forge Co.	66
Laminated Shim Co.	—
Landis Machine Co.	—
Lane-Wells Co.	—
Larkin Packer Co.	33 and Third Cover
The Layne & Bowler Co.	—
Lee Rubber and Tire Corp.	7
A. Leschen & Sons Rope Co.	—
The Lincoln Electric Co.	5
Link Belt Co.	—
Lone Star Cement Corp.	—
Lord Baltimore Hotel	—
Lucey Boiler & Manufacturing Co.	—
Neal Lucey Co.	—
Ludlow Valve Manufacturing Co.	—
Lufkin Foundry & Machine Co.	25
MacClatchie Manufacturing Co.	54
MacWhyte Co.	—
D. S. Mair Machinery Corp.	—
Maloney Tank Manufacturing Co.	—
Manhattan Rubber Division	—
Martin-Decker Corp.	—
Hotel McAlpin	—
McKissick Products Corp.	—
The Medart Co.	—
Merco Nordstrom Valve Co.	Insert, 35-36
Merla Tool Co.	—
Metric Metal Works	—
Miller Sand Pump Co.	85
Mission Manufacturing Co.	12
Lee C. Moore & Co.	—
Morse Chain Co.	—
U. C. Murcell, Inc.	—
Murray Rubber Co.	79
M & V Tank Co.	—
National Bank of Tulsa	—
National Lead Co.	—
National Lumber & Creosoting Co.	53
The National Supply Co.	29
National Tube Co.	8-9
Naylor Pipe Co.	—
New Deal Specialty Co.	—
Hotel New Weston	—
Norvell-Wilder Supply Co.	—
Walter O'Bannon Co.	—
O.C.S. Manufacturing Co.	—
Oil Center Tool Co.	—
Oil City Brass Works	—
Oil Well Improvements Co.	—
Oil Well Supply Co.	—
Oil-World Exposition, Inc.	—
Otis Pressure Control, Inc.	—
The Parkersburg Rig & Reel Co.	—
Patterson-Ballagh Corp.	49
Pelican Well Tool & Supply Co.	67
Petroleum Electric Power Club	—
Petroleum Rectifying Co. of California	—
Petty Geophysical Engineering Co.	—
Philadelphia Gear Works	—
Pittsburgh Equitable Meter Co.	Insert, 35-36
Pittsburgh Steel Co.	—
Plowden Supply Co.	—
Pyramid Manufacturing Co.	—
R-F Electrical Manufacturing Co.	—
Raybestos-Manhattan	—
Reading-Pratt & Cady Co.	—
Rector Well Equipment Co.	—
Reda Pump Co.	—
Reed Roller Bit Co.	—
The Republic Rubber Division	7
Republic Steel Corp.	—
The Rice Hotel	—
The Ridge Tool Co.	—
Rollway Bearing Co.	—
Jack A. Schley	79
Schlumberger Well Surveying Corp.	—
Scivally Bros.	79
Security Engineering Co.	—
Seismograph Service Corp.	—
Shell	—
SKF Industries, Inc.	—
A. O. Smith Corp.	—
E. M. Smith Co.	—
Howard Smith Co.	—
The Sonner Burner Co.	—
South Chester Tube Co.	—
Southern Engine & Pump Co.	—
Southern Pacific Lines	—
Hotel Southland	—
Spang & Co.	—
Spang Chalfant, Inc.	39
Sperry-Sun Well Surveying Co.	77
Standard Brake Lining Co.	84
Standard Pressed Steel Co.	—
Star Drilling Machine Co.	—
Sterling Engine Co.	—
Stevens Hotel	—
Templeton, Kenly & Co.	—
Texas Electric Steel Casting Co.	51
Texas Iron Works	—
Texas Steel Co.	—
Thermoid Rubber, Division of Thermoid Company	—
Thornhill-Craver Co.	—
The Timken Roller Bearing Co.	—
The Titusville Iron Works Co.	—
Tretolite Co.	—
Trinity Portland Cement Co.	—
Hotel Mark Twain	71
Union Carbide & Carbon Corp.	—
Union Wire Rope Corp.	—
United States Rubber Co.	—
United States Steel Corp.	8-9
Universal Atlas Cement Co.	—
Warner & Swasey Co.	—
The Watson-Stillman Co.	—
Waukesha Motor Co.	—
Westinghouse Electric & Mfg. Co.	—
Wheeling Machine Products Co.	—
Wickwire Spencer Steel Co.	—
J. H. Williams & Co.	82
Wood Preserving Corp.	53
Wilson Supply Co.	—
Worthington Pump & Machinery Corp.	—
Young Engine Corp.	—
Young Radiator Co.	—
Youngstown Sheet & Tube Co.	—